

213 C/6

T R A V E L S

I N T O

P O L A N D, R U S S I A, S W E D E N,

A N D

D E N M A R K.

INTERSPERSED WITH HISTORICAL RELATIONS
AND POLITICAL INQUIRIES.

ILLUSTRATED WITH CHARTS AND ENGRAVINGS.

By W I L L I A M C O X E, M. A. F. R. S.

LATE FELLOW OF KING'S COLLEGE, CAMBRIDGE;
MEMBER OF THE IMPERIAL OECONOMICAL SOCIETY OF ST. PETERSBURGH,
AND OF THE ROYAL SOCIETY OF SCIENCES AT COPENHAGEN;
AND CHAPLAIN TO HIS GRACE THE DUKE OF MARLBOROUGH.

VOLUME THE THIRD.

L O N D O N:

PRINTED FOR T. CADELL, IN THE STRAND.

M.DCC.XC.



TO
SAMUEL WHITBREAD, Esq. JUN. M. P.

THIS THIRD VOLUME

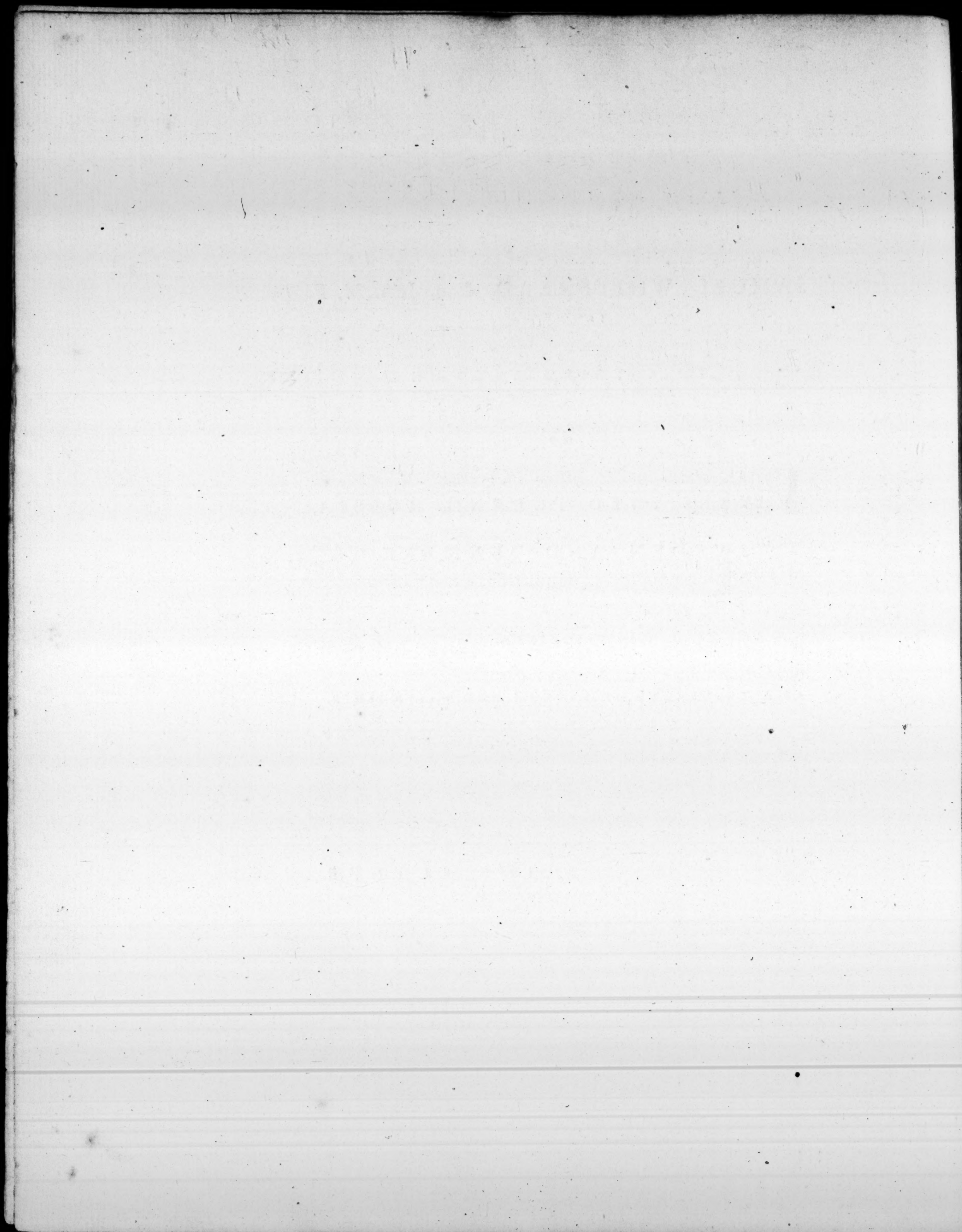
OF
TRAVELS INTO POLAND, RUSSIA,
SWEDEN, AND DENMARK,

IS INSCRIBED,
AS A TESTIMONY OF ESTEEM AND FRIENDSHIP,

BY

THE AUTHOR.

A 2



A D V E R T I S E M E N T

T O T H E

T H I R D V O L U M E.

IN this additional Volume, the Author submits to the Public a continuation of those observations, which a second journey into the northern kingdoms of Europe has enabled him to make; and more particularly an account of those countries which he did not visit in his former tour; namely, Jutland, Norway, Livonia, Courland, and Prussia.

BEMERTON,
NOVEMBER 2, 1790.

CONTENTS of VOLUME III.

B O O K IX.

TRAVELS into DENMARK.

Ch. I. *Journey from Hamburgh to Lubec—Travemunde—Eutin—Kiel—Sleswic—Mausoleum of Frederic the First—Angeln—Flensburg—Colding—Horsens—Remaining Family of Prince Ivan.* page 1

Ch. II. *Copenhagen—Palace—Libraries—Villa of Count Bernsdorf—Gratitude of his Peasants for having obtained their Freedom—Remarks on the Slavery of the Danish Peasants—Prison of Struensee—Account of the Execution of Struensee and Brandt—Environs of Copenhagen.* p. 17

Ch. III. *Presentation to the Prince Royal—Revolution in the Administration effected by his Royal Highness—Account of that Transaction.* p. 29

Ch. IV.

Ch. IV. *Excursion to Hirsholm, Fredericborg, Friedensberg, and Fredericwerk.* p. 38.

Ch. V. *Island of Huen—Biographical Memoirs of Tycho Brabe.* p. 48

B O O K X.

T R A V E L S into S W E D E N.

Ch. I. *Landscrona—Lund—Carlsrona—Calmar—Jonkioping—Wadstena—Medvi—Nordkioping.* p. 66

Ch. II. *Palace of Drotningholm—Gala Day at Court—Swedish Opera—Professor Sergell—Remarks on several late changes effected in the Government of Sweden.* p. 81

Ch. III. *Commerce of Sweden—A comparative View of the Exports and Imports for 1781—Revenues and Expenditure—Bank of Stockholm.* p. 93

Ch. IV. *Palace of Gripsholm—Strægnetz—Tombs of Steno Sture, and Charles the Ninth—Trolhætta—Bohus—Gotheborg—Herring Fishery—Marstrand—Uddevalla.* p. 118

C O N T E N T S.

ix

Ch. V. *General Remarks on Norway—History—Geography—Benefits of the Norway Law—Peasants—Climate.* p. 130

Ch. VI. *Fredericshall—Fortress of Fredericsstein—Observations on the Death of Charles the Twelfth—Tistedal—Fredericsstadt—Christiania.* p. 145

Ch. VII. *Silver Mines of Kongsberg—Cobalt Works of Fossun—Journey into the interior Parts of Norway.* p. 159

Ch. VIII. *Entrance into Sweden—Carlstadt—Philipstadt—Kioping—Biographical Anecdotes of Scheele.* p. 176

Ch. IX. *Palace of Stroemsholm—Canal of Stroemsholm uniting the Province of Dalecarlia with Stockholm—Incidents of the Journey.* p. 183

Ch. X. *Dalecarlia—Memorials of Gustavus Vasa—Oernetz—Copper Mine of Fablun—Cataract of the Dahl—Gefle—Loeffsta—Iron Mine of Danemora—Passage from Grisleham to Abo—Fortress of Sveaborg.* p. 195

C O N T E N T S.

B O O K XI.

TRAVELS into RUSSIA.

Ch. I. *Addition to the former Description of St. Petersburg—Collection of Pictures in the Imperial Palace—Plan for the public Schools.* p. 214

Ch. II. *Additional Remarks on the Population, Revenues, and Army of Russia.* p. 223

Ch. III. *Congelation of Quicksilver.—Dr. Guthrie's experiments to ascertain the freezing point of mercury, and to prove that the purity or impurity of the mercury by no means affects its congelation.* p. 243

Ch. IV. *Journey from Petersburg to Riga—History of Livonia—Narva—Dorpt—Riga—Anecdotes of General Brown.* p. 260

Ch. V. *Mittau—Dutchy of Courland—History—Succession—Anecdotes of Ernest John Biron—Constitution—Feodal Dependence on Poland—Rights of the King of Poland—Prerogatives of the Duke—Diet—Nobles—Religion—Language* p. 277

Ch. VI.

C O N T E N T S.

xi

- Ch. VI. *Memmel—Journey to Königsberg—Sketch of the History of Prussia—Warsaw—General Remarks on the present Situation of Poland.* P. 304

A P P E N D I X.

- N° I. *Geographical Division of the Russian Empire into Governments, Provinces, and Districts.* P. 317

- N° 2. *List of the Books consulted or referred to in this additional Volume.* P. 342

MAPS

MAPS AND PLATES IN THIS VOLUME.

1. Map of Southern Norway — — — to face page 130
2. Plan of the Canal of Stroemsholm — — — p. 185
3. Apparatus for freezing Quicksilver — — — p. 247

E R R A T A.

- P. 139. l. 17. *for* funavourable, *read* unfavourable.
P. 156. l. 8. *for* the Cobal works, *read* Mr. Cooper's works.

TRAVELS

T R A V E L S
I N T O
D E N M A R K.

B O O K IX.

C H A P. I.

*Journey from Hamburgh to Lubec—Travemunde—Eutin—Kiel—
Sleswic—Mausoleum of Frederic the First—Angeln—Flendf-
burgh—Colding—Horsens—Remaining Family of Prince Ivan.*

JULY 9, 1784. In our way to Denmark we quitted Ham-
burgh, and soon entered Danish Holstein, separated from the
dutchy of Saxe Lauenburgh by the small rivulet Bilde; and as
the roads were for the most part very heavy and sandy, we did
not arrive until ten in the evening at Hamfelde, a small village
in the dutchy of Lauenburgh. We passed the night in a cot-
tage similar to those in Westphalia, being a large barn into which
our carriage drove: at the lower end were cows, pigs, and
sheep, and our horses chained to their racks; a little higher

VOL. III.

B

were

BOOK
IX.

BOOK
IX.

were the beds for the family, ranged in kinds of cupboards in the walls, about four or five feet from the ground; at the upper end were three rooms, a kitchen without a chimney, a sitting-room, and a bed-chamber just large enough to contain two beds; and the landlady was much surprised that we insisted upon both beds, asserting that one was sufficient for two gentlemen. On her putting on a pair of sheets which did not seem clean, I gently remonstrated; as an apology, the good woman assured me that they were perfectly clean, no one having slept in them but her husband, who was as wholesome as an emperor. Unwilling to affront the good woman in the person of her husband, I acquiesced; but took them off when I went to bed, and passed the night in my clothes.

The next morning we continued our route to Moellen, though not the nearest way to Lubec, in order to examine the navigation of the Steiknitz, which unites the Elbe and the Trave. This water-communication is formed by the two small rivulets, the Steiknitz and the Devenau, the former of which falls into the Trave, and the latter into the Elbe at Lauenburgh. Professor Buesch of Hamburg informed me, that they were united by a canal cut by order of the government of Lubec, in the fourteenth century; and supposed to have been the first canal which had double sluice-gates. The average depth of water being only three feet and a half, no heavy-laden vessels can pass along. The watermen belonging to some barges carrying corn and planks told me, that they had employed eight days in coming from

from Lubec to Moellen, which is only thirty-six miles by land; and did not expect to reach Lauenburgh in less than eight days more. Seventeen locks must be passed by all vessels going from Lubec into the Elbe at Lauenburgh; yet, notwithstanding this inconvenience, about 440 vessels annually navigate this canal. The country around Moellen is agreeably diversified with fine woods of oak, beech, and birch.

Ratzeburgh is a small fortified town, prettily situated on an island in the midst of a lake about thirty miles in circumference; the banks whereof are abrupt, and pleasantly feathered with wood. The town partly belongs to the duchy of Mecklenburgh Strelitz, and partly to that of Saxe Lauenburgh. The buildings are of brick; and almost every house is shaded with a tree, which forms a singular and agreeable appearance.

From the lake of Ratzeburgh issues the river Wakenitz, which joins the Trave near Lubec, and thus facilitates the water-communication between Lubec and these parts.

The duchy of Saxe Lauenburgh belongs to the king of England, as elector of Hanover.

The road winds at a small distance from the lake of Ratzeburgh, commanding diversified views of wood, water, and fields of corn and pasture. We entered the territory of Lubec about the distance of three miles from that city, and passed over much sand and barren heath, till we drove into its gate.

Lubec, the head of the Hanfiatic league, was formerly the most commercial city, and most powerful republic of the north.

BOOK
IX.

Her fleet set at defiance the northern powers, and rode mistress of the Baltic. How are the mighty fallen! she no longer retains a shadow of her former power, has lost great part of her trade; and her commerce, considerably diminished, will suffer still more diminution, if the canal of Kiel should answer the purposes for which it was planned: for by that means great part of the merchandize which now passes through this town will be conveyed along that canal down the Eyder to Toningen, and thence by sea and up the Elbe to Hamburgh. In order to counteract these effects, professor Buesch has formed a plan to render the Steiknitz navigable for vessels of burden as far as Lauenburgh. If this project should be carried into execution, the advantages arising to the dutchy of Lauenburgh, as well as to the city of Lubec, are too evident to require an explanation.

The houses of Lubec are built in a very ancient stile of architecture, the doors being so large as to admit carriages into the hall, which frequently serves for a coach-house. The walls of many houses bear the date of the fifteenth century; and doubtless, at that period, the town was esteemed extremely beautiful.

The quay of Lubec is on the river Trave, which falls into the sea at the distance of fourteen miles. I observed about 120 merchant-ships destined to Russia, Sweden, and Denmark. It admits vessels from 150 to 200 tons burden, and sometimes, but rarely, 300. The trade of Lubec is chiefly a trade of commission,

fion, drawing from Ruffia, Sweden, and Denmark, their raw commodities, and supplying them with wines, filks, cloth, and steel ware.

CHAP.

I.

Being unwilling to quit the territory of Lubec without visiting Travemunde, we set off at five in the afternoon; and at seven reached Travemunde, distant from Lubec about nine miles. We found a very clean and comfortable inn, good accommodations, and a civil landlord who spoke English.

Travemunde, or the mouth of the Trave, so called from its situation on the point where that river falls into the Baltic, owes its existence to its being the port where the vessels destined to and from Lubec take their station. We hired a boat, and rowed round the port to the road. The port is able to contain sixty vessels, and is sufficiently deep to admit those of 200 tons burden, the same as ascend the Trave to Lubec. Men of war ride at anchor in the road. Our landlord procured from the pilot the following list of the merchant-ships which took their departure from Travemunde in the following years.

In 1778, 941 ships; in 1779, 916; in 1780, 803; in 1781, 935; in 1782, 858; in 1783, 951. Of these our landlord conjectured, that 150 belonged to Lubec, that 300 were Danish, 250 Swedish, 100 Prussian, 20 Dutch, and 10 English. Travemunde is defended (if it can be called defence) by a small fortress mounting forty guns, and containing a garrison of 50 men.

June 12th. We continued our route for some miles along the
fands

BOOK
IX.

sands of the Baltic, to Haffkrog, a village in Danish Holstein, about five miles from Lubec. A little farther we came to Sufelen, a village in the dominions of the prince bishop of Lubec; and soon afterwards reached Eutin, a town with a palace, in which he usually resides; and from which he also assumes the title of the prince of Eutin.

The present prince is brother to Adolphus Frederic, late king of Sweden: it is, like Osnabrug, a secular bishoprick.

The palace is a large brick building on the banks of a lake, and contains nothing worthy of the least observation, except a few indifferent family pictures, amongst which I remarked one of the duke of Anhalt, remarkable as being the father of the fortunate Catherine the Second, empress of Russia; and another of Charles duke of Holstein, father of the unfortunate Peter the Third.

The grounds are laid out in strait walks, with cut hedges, stagnated canals, and *jets d'eau*, with an intermediate plot of ground called an English garden; consisting chiefly of zig-zag walks, which, according to the opinion of most foreigners, are ridiculously supposed to form the peculiar excellence of our style.

The environs of Eutin are most delightful; and the road from thence to Ploen, and still farther to Kiel, runs through a fertile country, through fields of corn and pasture, enclosed with "hedge-row elms and coppice green," and beautifully interspersed with groves of oak and beech.

I again examined the canal of Kiel, which was begun in 1777, and of which I have given a plan and description in the former account of my travels*. It is now almost finished, and will probably be opened for navigation in the space of three or four years. The whole expence will not amount to £.800,000. An expence by no means to be regretted, if the inland navigation between the two seas can be established on a permanent footing.

The project of those who planned this canal was no less than to draw by Kiel into the Baltic the commerce of Bremen, Hanover, and Westphalia, which is now carried down the Vefer and by Gluckstadt upon the Elbe to Hamburgh and Lubec, and to facilitate the transport of merchandize from Holland and the north sea to the ports of the Baltic. But the principal impediment to the success of this canal seems to arise from the difficult navigation of the Eyder between Rendsburgh and Tonningen, on account of the numerous shoals occasioned by the shifting sands, which not unfrequently render the entrance into the Eyder impracticable, and always prevent any vessels from passing which draw more than nine feet of water. Few ships therefore which navigate the Baltic will unload their goods at Kiel, in order to embark them in smaller vessels to Tonningen, where the merchandize must be again reimbarcked. Ships sailing from the Baltic to any of the English or French ports will doubtless prefer the navigation round the Cattigate, with all its dangers and difficulties. Those which are destined for Hamburgh, or the ad-

* Book VIII. C. v.

BOOK
IX.

jacent parts, will choose perhaps the shorter and more secure passage of the canal. But it is much to be doubted, whether the commerce between Hamburgh and the north will be sufficient to answer the expences of its construction. The trade of Kiel at all events will be greatly increased by this canal; but the principal depository of the merchandize will be at Rendsburgh.

The church of Sleswic contains the sepulchre of Frederic the First, son of Christian the First. The tomb is a sarcophagus of dark-coloured marble, supported by six female figures standing upon pedestals, and answering the purpose of columns. These figures are, Charity, accompanied by two children, her usual emblem; Fortitude, holding a broken column; Prudence, with the serpent; Justice, with her scales; Jurisprudence, with tablets; and Hope, with an anchor: their countenances are Greek, and uncommonly pleasing, and the drapery truly elegant, after the fashion of the antique. Towards the bottom of the sarcophagus are four beautiful little angels or genii, with their torches reversed, and above is placed, the figure of the king in armour. At each end are the figures of two women, of the same size and elegance as those which support the sarcophagus; one holds the royal coat of arms, the other an inscription containing Latin verses in praise of the deceased. All the figures are of the finest alabaster, and were probably executed in Italy.

Frederic the First, son of Christian the First, received as his inheritance the duchy of Sleswic, and the crown of Denmark on the deposition of Christian the Second. Seated,
on

on the throne by the universal sense of the nation, he was established in it rather by the zeal of his subjects, and by the co-operating assistance of Gustavus Vasa, his protector and rival, than by his own prowess. He seems indeed to have inherited the mild and pacific virtues of his father Christian the First; virtues which would never have raised him to a throne, if the general odium had not conspired to the deposition of Christian the Second. He died in 1533, aged 60 years.

Instead of proceeding from Sleswic to Flensburg by the nearest way, along the high road, we made a pleasant excursion by Cappel, through that part of the duchy of Sleswic called Angeln or Engel, from which doubtless is derived the native country of our Anglo-Saxon ancestors, who invading and taking possession of our island, formerly called Britain, converted its name into England or Engelland. The truth of this fact, sufficiently authenticated by history, is still further corroborated by the resemblance which this fertile district of Angeln bears to our native island in the general appearance of the country.

Cappel is a small but neat town upon the Sley, the same bay which reaches to Sleswic. It contains about 550 inhabitants, who are industrious, and carry on some trade, exporting bacon, cheese, butter, eggs, and other commodities to Copenhagen, and supplying the interior parts of this province with coffee, sugar, spices, and other foreign commodities. The environs of Cappel are quite delightful, being grounds gently rising, sprinkled with much wood, and commanding fine views of the bay.

BOOK
IX.

The country which we traversed from Cappel to Flensburg was no less delightful; the gravel roads wind through green lanes, with quickset hedges, through enclosed fields, and small woods, reminding me so much of my native country, that I almost fancied I was passing through English lanes and English enclosures: the country is greatly diversified with scattered farm-houses and frequent villages.

We made this excursion in an open cart; and, as the weather was fine, enjoyed a constant view of this delightful and cultivated district. The peasant who drove us informed me, that the country yields all sorts of grain and flax, and abounds in pasture; that the peasants weave sufficient linen and coarse cloth for their own use, knit their worsted stockings, and make their boots and shoes. They procure hats and a better sort of cloth from Flensburg. Their food is chiefly rye-bread, cheese, eggs, milk, and occasionally meat. They distil spirits from malt, and make cyder, which is their usual drink.

Flensburg carried on a considerable trade during the American war, and possessed 200 merchant vessels, several of which sailed to the West Indies. Peace has restored the commerce to its old channels; many of the vessels have been sold, the traffic to the West Indies has been considerably lessened, and the chief trade of the town now centers in the isle of Zealand, the coasts of Norway, and Sweden.

From Flensburg we pushed our travels into Jutland, not so much with a view to see the country, as from a desire to pay our

respects to the brothers and sisters of the unfortunate prince Ivan, who are now settled at Horfens, a town of Jutland, situated at the extremity of a bay of the Baltic, a few miles from the frontiers of Jutland.

CHAP.

I.

Having passed through Haderslev and Apenraad, we quitted the duchy of Sleswic, crossed the small river Aue, which forms the boundary of that duchy, and arrived at Colding, the frontier town of Jutland, a small town on the extremity of a bay of the Little Belt. The harbour is above two miles in circumference, and sufficiently deep to admit ships of the largest burthen.

The royal palace is a large quadrangular building of brick stuccoed white : it contains a magnificent suite of 190 rooms of good size and proportions, which have not been furnished since the time of Frederic the Third. This palace, now untenanted and out of repair, was formerly much visited by the kings of Denmark, two of whom died in the chamber which is now called the prince royal's apartment ; namely, Frederic the Second, and Christian the Third. The apartment is hung with old tapestry, representing the great Margaret hunting, who is said to have resided here. A fine prospect presented itself from the windows of the castle, commanding the harbour, bounded by gentle hills diversified with wood and pasture, and closed by a distant view of the isle of Funen. A small toll is paid for all cattle passing from Jutland into Holstein. If I am rightly informed, about 200 horses, 4000 oxen, and 10,000 swine are annually exported by this passage.

BOOK
IX.

On our arrival at Horsens we waited upon the principal officer attendant on the Russian princes, and requested to have the honour of being presented to their highnesses. We received a favourable answer; but when we expected that our request would be complied with, we were put off with several excuses; first, that one of the princes was indisposed; another time, that as they could scarcely speak any language but the Russian, they were embarrassed with strangers. We did not know, until we were informed by Mr. Guldberg, whom we had the honour of seeing at Aarhus, that by special orders from the court of Denmark no foreigners are permitted to be presented to them. When the empress had determined to set them at liberty, she sent a Livonian lady, who accompanied them from Kolmogori to Flatsstrand. They embarked at Archangel, and were three months at sea in their passage to Berghen in Norway. The night after they landed at Flatsstrand on the coast of Jutland, they were received at Aalberg by Count Osten, governor of that place, where they remained five days. From thence they proceeded by easy journies to Horsens. They were only accompanied by a Russian lady, and a priest and his wife. From their ignorance of any language but the Russian, and their inability to converse with most of those who were placed about them, on their first arrival at Horsens they appeared even to regret their prison at Kolmogori. But they were soon reconciled, and became quite delighted with the change in their situation.

They are still a kind of state prisoners, though, in comparison
with

with their former situation, may be said to enjoy perfect liberty. They never go out without attendants, and have not yet been permitted to visit any family in the town. The gates of their house or palace, as it is now called, are carefully closed in winter at ten, and in summer at eleven. They amuse themselves with reading, playing at billiards, cards, riding, and walking. They walk much about the town, and in the environs, and drive out in carriages; the princes frequently ride, and particularly Alexey, who is very fond of that exercise, and is said to be expert. They not unfrequently pay visits in the country, and dine with the neighbouring families.

The names of these illustrious descendants of the imperial family of Russia, are, Catharine, born July 26, 1741; Peter, born March 31, 1745; Alexey, born March 7, 1746, of whom Anne died in childhood. This prince is since dead. Elizabeth, the youngest sister, was a woman of high spirit and elegant manners. On being released she wrote a letter of thanks to the empress, so well expressed, as to excite admiration how she could have obtained sufficient instruction during her long confinement. Her father is said to have instructed her; but she likewise obtained considerable information from several officers who were her guards, and whom she conciliated by her captivating manners. On her arrival at Horsens she possessed portraits of her father and mother, and even contrived to procure a rouble of her brother Ivan, struck in his short reign. It is difficult to conjecture how she could obtain a coin, the possession of which was more than
once

BOOK
IX.

once punished by the empress Elizabeth as high treason ; and it is still more difficult to imagine how she could secrete it from the knowledge of her guards during her long imprisonment in Russia. She alone, of her brothers and sisters, could speak a little German, and served as an interpreter between them and prince Ferdinand of Brunswick, who came more than once to visit his nephews and nieces. She is reported to have died of chagrin ; but, as far I could collect, her death was occasioned by a violent fever, which was soon attended with a delirium, and hurried her to the grave on the sixteenth day of her illness.

But though we were unsuccessful in our attempt to be presented, we did not however quit Horsens without seeing their persons ; as on the day after our arrival there was a great fair, and many people were assembled in the market-place, the princes frequently appeared at the windows of their palace to look at them. The princess seemed pale and thin ; the princes were about the middle size, fair complexioned, with strong features, light hair, and expressive eyes.

As I beheld these august descendants of the Tzar Ivan, I felt extreme satisfaction, in reflecting that they were enlarged from the precincts of a Russian prison ; and admired the humanity and magnanimity of Catharine the Second, who ventured to release from a long confinement of more than forty years, persons whose parents had died in prison, whose brother had once filled the Russian throne, and closed his unfortunate life by the hand of violence. The empress of Russia
allows

allows them an annual salary of £.5000 sterling. In my former publication* I expressed my doubts whether Ivan had ever been confined at Kolmogori; but I can now assert, with as much certainty as the circumstance will allow, that he was imprisoned there for several years, but separately and unknown to the rest of his family.

Prince Antony Ulric and his four children were confined in a house with a large court-yard, about an English mile in circumference, surrounded with high pallisadoes: within this precinct they were permitted to walk and ride without molestation, but were never suffered to pass the limits bounded by the pallisadoes. They instantly perceived a great difference in their treatment from the moment of the present empress's accession to the throne. They had a large suite of domestics, several horses, and were served off plate. They were instructed in reading and writing. Their father had for a long time been greatly afflicted with the gout, and for a year before his death was totally blind.

The country from Horsens to Aarhus is mostly open, fertile in corn and pasture, and occasionally dotted with woods of small beech and oak, in the midst whereof were pleasantly situated country houses and noblemen's seats. The villages were very few; many farm-houses were scattered in the fields; and the churches built of brick or stone, roofed with red tiles, standing separately, and at a distance from the villages, were picturesque objects.

* Book V. c. ii.

BOOK
IX.

Finding a packet-boat ready to sail for the isle of Zealand, and learning that the wind was fair, we contented ourselves with a cursory view of Aarhus, which contains nothing remarkable, and instantly took our passage. We set sail about nine in the evening; made during the night scarcely more than twelve miles; but in the morning a favourable breeze freshening, we crowded sail, and bore away expeditiously. We passed several small islands, low and sandy, and for the most part destitute of wood. Samsoe, the largest, is twelve miles in length. We coasted its western side. The southern shore is somewhat woody. At a distance we descried the isle of Funen; and at two landed at Calendborg, which lies in a bay, the surest harbour in the isle of Zealand.

The castle of Calendborg, in which the unfortunate Christian the Second closed his days *, is merely a mass of ruins. It was destroyed in 1658 by the Swedes, who recollected, that their king Albert had been confined there by Margaret his rival and conqueror. The next day we reached Copenhagen.

* See B. VIII. c. v.

C H A P. II.

Copenhagen—Palace—Libraries—Villa of Count Bernsdorf—Gratitude of his Peasants for having obtained their Freedom—Remarks on the Slavery of the Danish Peasants—Prison of Struensee—Account of the Execution of Struensee and Brandt—Environs of Copenhagen.

THE royal palace is a very magnificent triangular building of hewn stone, the wings and stables of brick stuccoed. It was built by Christian the Sixth in seven years, as the inscription informed me, without laying a single tax on the subject. The enormous expence may be in some measure estimated by its dimensions. The front is 367 feet in length, the sides 389, and the height 114. It has six stories, of which three are mezzonines. In the fourth story are the grandest suite of apartments, both as to size and decoration. The concert-room is 128 feet by 38. The *Ritter Saal*, or Knights Saloon, is remarkable for the grandeur and elegance of the proportions; it is 128 feet long, 62 broad, and 48 high. It is lighted by several crystal chandeliers, and many gilded urns placed upon the balustrades of a gallery.

Among numerous pictures of the kings and queens of Denmark, I was greatly struck with a portrait of Christian the Fourth on board of a ship engaged with the Swedish fleet. In

BOOK
IX.

the middle of this engagement the king was struck by a splinter torn from the mast by a cannon-ball; two of his teeth were beat out, his ear torn, his right eye forced from the socket, and he was thrown upon the deck with great violence. His attendants, supposing him dead, were making bitter lamentations, when the king, suddenly recovering from the swoon, into which he had been thrown by the agony of pain, started up, bound his wounds with his handkerchief, and continued giving his orders with the greatest composure, until the Swedish fleet retired. The painter has chosen the point of time in which the king, having recovered from his swoon and bound his wound, is exerting himself in the midst of the action, and has happily succeeded in throwing great animation over the whole figure.

The royal stables are perhaps the most magnificent in Europe. The racks of one, which contains stalls for 48 horses, are of copper, and the columns that support the stalls are of brick stuccoed white. Another contains 148 stalls; and the racks and pillars which support the roof and separate the stalls are of Norwegian marble.

There are two libraries belonging to the king, a private and a public, both in the apartments of the palace. The private library contains about 20,000 volumes; the public 110,000, and about 7,000 manuscripts. Among the latter are many Persian and Arabic, brought from Arabia by Niebuhr. Among the manuscripts of the classics, I observed a most beautiful Cicero's Rhetoric on vellum, and a no less beautiful Virgil on vellum, of the eleventh century, which has been collated by the learned

Heyne of Gottingen for his excellent edition of that Roman poet.

CHAP.
II.

This collection is extremely rich in Icelandic books, and in all publications relative to the antiquities and history of the three northern kingdoms. The art of typography must have been introduced late into Denmark, as the earliest book printed at Copenhagen is Skansky Logh, or king Waldemar's Law of Scania, which bears the date of 1505. This library has been lately augmented with the numerous and valuable collection belonging to Count Thott, who died lately, and bequeathed it as an addition to the king's library.

The library of Count Thott, probably the largest private collection in Europe, contains 110,000 books, and above 5,000 manuscripts. It is as remarkable for the rarity, as for the number of the books, and is particularly rich in the palæographia, or early printed books, of which there are above 2,000 printed in the fifteenth century.

The catalogue of this curious and valuable collection will consist of several volumes; of which two have been already published. The remaining volumes will be printed before 1792. The seventh volume, which comprises a list of the early impressions and manuscripts, will likewise give the early impressions and manuscripts in the king's library.

Mr. Suhm's collection, though not so numerous as Count Thott's library, deserves to be visited by the lover of letters. It contained, in 1785, at least 50,000 books, entirely collected by himself. It is extremely rich in historical and topographical

BOOK
IX.

publications in all languages, and particularly those which relate to the antiquities and history of northern Europe, the favourite object of the learned proprietor's studies and researches. He possesses also a fine collection of manuscripts in the Greek and Oriental languages, and particularly those which belonged to the celebrated Reiskius, for the purchase of which he bestows on the widow of that celebrated critic an annuity of £. 40.

The library of Mr. Suhm is open every morning from nine to eleven for the use and inspection of the men of letters, and students of the university.

Mr. de Suhm is justly considered one of the most learned men in Denmark, in regard to the history and antiquities of the north. He has already given to the public the following works on these subjects, much esteemed for the profoundness and accuracy of his researches: 1. Upon the Origin of Nations in general. 2. Upon the Origin of the Northern Nations. 3. Concerning Odin, and the Mythology of the Northern Nations. 4. Upon the Emigrations of the Northern Nations, 2 vols. 5. Critical History of Denmark, 2 vols. 6. History of Denmark.

During our stay at Copenhagen, we experienced great civility and repeated instances of hospitality from the Danish nobility. Among others we had the honour of dining several times with the prime minister Count Bernsdorf, at his villa, about four miles from Copenhagen. The house, built by the late count, stands in a delightful situation on a gentle rise, sloping towards
the

the sea, backed by a ridge of hills prettily wooded, and commanding a pleasant view of the Sound, the coast of Sweden, Copenhagen, and the numerous vessels sailing to and from the capital.

CHAP.
II.

In our way to the village we passed a column of Norwegian marble, erected to the memory of the late Count Bernsdorf by the peasants of his estate, in gratitude for having received the gift of freedom from their beloved master. The pillar is ornamented with a wheat-sheaf, a spade, and a pick-axe, the emblems of agriculture. It contains a Latin and Danish inscription. I copied the former, and shall here insert it as a memorial of the count's liberality, and of their gratitude :

Piis manibus Joh. Hartvici Ernesti, Comitis de Bernstorff, qui arva discreta immunia hereditaria largiendo industriam opes omnia impertit in exemplum posteritati 1767. P. S. S. grati coloni 1783.*

It is much to be regretted, that few persons in Denmark have followed the example of Count Bernsdorf.

The slavery of the peasants is part of the unfortunate remains of the feudal system, which, however modified and changed in the other parts of the Danish constitution, still leaves behind it that

* " To the affectionate memory of industry, wealth, and every blessing, as John Hartvic Ernest, Count of Bernstorff, who in 1767 rendered free his grateful peasants, 1783." hereditary estates, and thereby imparted

indelible

BOOK
IX.

indelible mark of its former preponderancy and injustice. It is remarkable, that hitherto all the attempts to abolish it, which have succeeded in Sweden, Norway, and several parts of Germany, have contributed only to rivet still more strongly in Denmark a servitude, no less disgraceful to the government, than prejudicial to the community. I enjoyed however great satisfaction in finding, on my second visit to Copenhagen, that the spirit of justice and humanity, and I may add, the suggestions of self-interest, had lately begun to spread themselves among the nobility; and that a few of them were upon the point of emancipating their peasants. And as the prince royal has turned his humanity and attention to this subject *, and seems inclined to favour any well-planned system, which may give new life and vigour to an order of men, the most useful in the community; it is to be presumed, that in time the prejudices against such a system will be removed; and that such effective and prudent measures will be adopted by government, as may, without any convulsion, restore to the peasants the common rights of mankind.

We were present at a very agreeable dinner given by admiral Molcke, on board of the Princess Sophia Frederica, a man of war carrying 74 guns, and 600 men, lately fitted out, and going upon a cruise to the Baltic, with three other ships of the line. We embarked at the port, and were rowed in the captain's boat

* I am informed, that since my departure from Copenhagen, the prince has given freedom to the crown-peasants.

to the ship, where we found Count Molcke, and a large company, consisting of persons of the first condition, assembled. From the captain's cabin we had a most delightful view of the town and dock-yard of Copenhagen; of the Danish navy laid up in two lines in the harbour; of several men of war and frigates lying at anchor near us in the road; of numerous vessels sailing and covering the surface of the sea, which was curled by a gentle breeze; of the distant coasts of Sweden, and the adjacent shores of Zealand, richly clothed with wood. Dinner was served upon deck, under a canopy of sails and pendants; and forty persons sat down to a most superb and elegant repast. After drinking the healths of the king and royal family, each health accompanied with a salute of fifteen guns, admiral Molcke gave, in compliment to Mr. Elliott, the English envoy, who was present, The navy of England; and Mr. Elliott in return gave, The navy of Denmark. Several Danish songs were sung to the accompaniment of violins and tambours de basque, which had a most pleasing effect. These songs related to naval engagements, and to the honour of the Danish marine; and the chorus was repeated by the company, and echoed by the whole ship's crew. Books containing the words of the songs were handed round the company, with the Danish on one side, and the English on the other. One song recorded the gallant behaviour of admiral Huitfield, who, in an engagement with the Swedish fleet, finding his own ship on fire, instead of endeavouring to escape in the long-boat, grappled with two of the enemy's men of war, and blew them up with his own ship. Another song

song in honour of their favourite hero Christian the Fourth, is as popular in Denmark as "Rule, Britannia, rule the Waves," in England. I recollect the following lines of a doggerel translation in the beginning of the song :

King Christian stood high near the mast,
In clouds of smoke :
His shining sword was working fast,
Cleft brains and helmets first and last,
Then sunk each Gothic hulk and mast,
In clouds of smoke, &c.

In visiting the citadel, I inquired for the cells in which Struensee and Brandt were confined. The dungeon which served as a prison for Struensee is on the ground-floor, fourteen feet long, and twelve broad. The barrack bedstead on which he lay is still there, and the chain to which he was fastened is riveted to the wall : it is only eight feet long. During his confinement he was treated with the greatest inhumanity, and frequently deprived of the commonest necessaries : he was chained to the wall in such a manner as scarcely to be able to turn himself ; and occasionally threatened with the torture, if he would not confess what his enemies dictated.

I visited likewise the spot where Struensee and Brandt were executed, on the 28th of March 1772. The scaffold was constructed in the middle of East field, near the east gate of the town ; and they were conducted to the spot in two separate carriages,
through

through an immense concourse of people, assembled to see the execution. They arrived at the place of execution about eleven. Brandt first alighted, and mounted the scaffold with a slow step and undaunted mien. He heard his sentence read, and saw his coat of arms torn, without expressing the least emotion. He then prayed for a few minutes, and spoke a few words to the people. When the executioner approached to assist him, he said to him with firmness, yet not without mildness, "Stand off, and "do not presume to touch me." Without any assistance he pulled off his pelisse, and prepared for his fate. He first stretched out his hand, and bade the executioner do his duty, without shrinking from the blow: it was struck off, and his head was severed from his body almost in the same instant. His body was then quartered.

During this dreadful scene Struensee was at the bottom of the scaffold, anxiously expecting and dreading his own fate. His whole frame trembled when he saw Brandt's blood gushing from the scaffold; and he was so agitated, that he could not walk up the steps without help. He said nothing, and permitted the executioner to assist him in taking off his cloak. Instead of imitating the courage and serenity of his fellow sufferer, he started up several times from the block, before he could prevail upon himself to give the signal, drew back his hand, and was shockingly maimed before it was cut off, and was at last held down by force while the executioner beheaded him.

The environs of Copenhagen are exceedingly beautiful. The
VOL. III. E country

BOOK
IX.

country is gently undulating, produces much corn and pasture, and is finely interspersed with small forests of beech and oak. The sea views are uncommonly enchanting, and the villas and country seats delightfully situated on the shores of the Sound.

The royal park, about four miles from the capital, is perhaps the finest spot for the natural beauty of the gently waving grounds, and the richness of the wood; and sufficiently proves, that the nobles might lay out their grounds equal to ours in England, if they would trust more to nature and less to art.

In the midst of the park St. Helen's spring is a favourite spot, to which the nobility and gentry, and the lower class of people, resort in the month of July, as to a kind of fair. Many tents and booths are erected for the reception of the company. Sometimes the royal family make their appearance. The common people esteem themselves very unfortunate, if they do not taste the waters of the spring every year. The weather being very fine, and the season quite delightful, we roved with pleasure about the woods, enjoying the beauties of unadulterated nature, and walked to the hermitage, a building standing in the most elevated part, and commanding a most extensive view over the Baltic, the isle of Huen, and the coast of Sweden.

The following table will give a more exact notion of the revenues and expence of Denmark, in time of peace, than I was able to furnish in my former volumes.

Danish

Danish Revenues.

CHAP.
II.

Land-tax	-	-	-	£. 800,000
* Sound duties	-	-	-	100,000
Poll tax and other taxes	-	-	-	300,000
† Extraordinary contributions	-	-	-	200,000
				£. 1,400,000

Danish Expenditure.

Civil list	-	-	-	-	400,000
------------	---	---	---	---	---------

* The importance of the Sound duties to the government of Denmark, may be inferred from the number of vessels which passed the Sound in 1782.

English	-	-	-	1264	Lubec	-	-	-	112
Danish	-	-	-	1634	Bremen	-	-	-	240
Swedish	-	-	-	2121	Hamburgh	-	-	-	50
Russian	-	-	-	158	Rostock	-	-	-	89
Dutch	-	-	-	16	Venice	-	-	-	3
Portuguese	-	-	-	38	Austrian Netherlands	-	-	-	505
Prussian	-	-	-	1907					
From Dantzic	-	-	-	328					8465

† Among the extraordinary contributions is the tax on honours and rank, laid in the following proportion:—Persons of the first rank pay annually 80 rix-dollars, or 16 l.; of the second 14 l.; of the third 8 l.; fourth 6 l.; fifth 3 l. 4s.; sixth 3 l.; seventh 2 l. 8s. eighth 1 l. 12s.; and ninth 1 l. 4s. All the places and pensions are

rated in the following proportion:—Pensions not less than 400 rix-dollars or 80 l. and upwards, pay 10 per cent.; from 70 l. to 80 l. 8 per cent.; from 60 l. to 70 l. 7 per cent.; from 50 l. to 60 l. 5 per cent.; from 40 l. to 50 l. 4 per cent.; from 30 l. to 40 l. 3 per cent.; and from 20 l. to 30 l. 2 per cent.

BOOK
IX.

Army	-	-	-	£. 400,000
Navy	-	-	-	200,000
Payment of debts	-	-	-	200,000
Penfions	-	-	-	160,000
Jointure of the queen-dowager	-	-	-	16,000
Income of prince Frederic	-	-	-	8,000
				£. 1,384,000

The public debt in 1785 amounted to £. 3,600,000, of which in time of peace about £. 200,000 is annually liquidated. Lately however this liquidation of the debt owing to the subjects has been made in bank notes. Although this measure saves to the nation the payment of the interest of 4 per cent. in money, yet it too much promotes the increase of paper currency. The bank notes are not exchanged at Hamburgh, except under a discount from 16 to 20 per cent. There is but little specie in the country. The specie collected for the Sound duties is chiefly appropriated to the interest of the foreign debt, and the appointments of persons employed in Holstein; and the produce of the silver mines at Kongsberg scarcely exceeds £. 50,000 per annum.

C H A P. III.

Presentation to the Prince Royal—Revolution in the Administration effected by his Royal Highness—Account of that Transaction.

IN a private audience of the prince royal, I had the honour of presenting my Travels in Poland, Ruffia, Sweden, and Denmark. His royal highness conversed with me for a considerable time; and, by the questions he put to me, and the remarks which he made, gave strong signs of a comprehensive mind, and of a disposition formed for government. I could not avoid admiring a prince, who at the age of sixteen acted with so much firmness, secrecy, and discretion; and who lately effected a change in the governing administration of this kingdom, no less by his own prudence and courage, than by the advice and assistance of his friends.

CHAP.
III.

Since the imprisonment and exile of Matilda, the whole power was vested in the queen-dowager Louisa Maria; and the administration, which ostensibly carried on the public affairs, was entirely subservient to her views, and to those of her son prince Frederic.

The late king of Prussia had, by means of his cousin the queen-dowager, gradually acquired an almost absolute sway in the cabinet of Denmark; and directed the foreign affairs in subserviency

BOOK
IX.

fervency to the views of the French court, and in opposition to the interests of England. Count Bernsdorf, prime minister, being the only person in the Danish ministry who ventured in any degree to oppose the French and Prussian party, his dismissal was resolved in the cabinets of Versailles and Berlin; and his conduct, with regard to the armed neutrality, furnished an opportunity to effect their purpose.

The king of Prussia having prevailed upon the reigning party to accede to the armed neutrality, a measure so hostile to the interests of England, Count Bernsdorf, though he could not prevent the measure, had yet sufficient address to insert an article in the treaty, that Denmark should maintain its former alliances.

This conduct gave great disgust to the king of Prussia; and prince Ferdinand of Brunswic was sent to offer Bernsdorf, that he should be continued in the office of prime minister, if he would agree to the armed neutrality without the aforesaid stipulation; and to threaten him with instant dismissal, if he persevered in that point. Bernsdorf, nobly disdaining to hold his office on such precarious and dishonourable terms, was dismissed from his employments, and retired into Germany; and his removal gave full and unlimited scope to the Prussian party, which governed the queen-dowager.

Mr. Guldberg, formerly professor of the academy of Soroe, and preceptor to prince Frederic, was the person in whom the queen-dowager confided, and in the capacity of private secretary to the king was the secret, though not the ostensible minister.

A change was also introduced in the usual mode of issuing the royal mandates, which secured to the queen-dowager and her party the most absolute sway.

CHAP.
III.

Previous to this change, the general affairs of government were transacted in the privy council, consisting of as many members as the king chose to appoint; all particular business was carried through the different boards of finance, marine, and commerce, and the king always signed the decrees and edicts separately in each board.

In order to extend their influence and authority, the reigning party introduced a kind of private cabinet, in which the king issued his orders solely from himself, and exclusively of the several boards. By this means the privy council became little more than a cypher; the respective boards were only employed in fulfilling the king's orders; and, as the king himself was incapable, the party, having possession of his person, could obtain his signature on all occasions, and was, in effect, sovereign without controul.

Nothing could alter this state of affairs, but the admission of the prince into the privy council; and as, according to the laws of Denmark, he could not be sworn a member of that council until he had been confirmed and taken the sacrament; and as, in order to be confirmed, he was to undergo a public examination, the governing party contrived to delay that ceremony, under the pretence that he was not sufficiently instructed in the duties of religion. Reports were industriously circulated,
and

BOOK
IX.

and as readily believed, by those whose interest it was to believe them, that the prince's abilities were extremely moderate. And, although it was usual for the prince royal of Denmark to be confirmed, and take his seat in the privy council, at thirteen, yet this ceremony was repeatedly postponed long after the prince had reached that age, under a notion that he was incapable of undergoing a public examination.

But when the prince had nearly attained his sixteenth year, they could not venture to delay his confirmation any longer. As the fatal hour approached, every precaution, which prudence or art could suggest, was taken to gain the prince, and to continue the power in the same hands in which it had been so long vested. For this purpose his governor, general Eiksted, who was not beloved by his royal pupil, was dismissed; and Sporen, his preceptor, and supposed to be his favourite, appointed secretary of the cabinet. A new privy council was nominated, consisting almost entirely of the queen-dowager's creatures, in which Mr. Guldberg had the principal sway.

Every thing seemed to bend before her, when the prince effected a revolution in the administration of Denmark, as singular as it was unexpected.

On the 4th of April 1784, the prince was confirmed in the royal chapel of Copenhagen, in the presence of the king and court. According to the custom of the Lutheran church, he underwent a previous examination by the king's chaplain. The examination continued above an hour; and the prince, as I have
been

been assured by many persons who were present, replied in a very sensible manner; sufficiently proving, from the readiness and perspicuity of his answers, that the reports of his incapacity were malicious and unfounded. He spoke in a loud, clear, manly tone of voice, with a dignity and propriety which astonished the assembly; and when he repeated the oath, by which he swore to continue true to the established church, he did it in so feeling a manner, as absolutely to draw tears from the eyes of many who were present.

Having, on a subsequent occasion, received the sacrament, he was admitted into the privy council; and, on the morning of the 14th of April, took the accustomed oath. About five in the afternoon, the prince and the other members of the new privy council assembled for the first time in the king's presence. Mr. Steman, who was at the head of the treasury, was going to propose the ordinary business of the day; he was interrupted by the prince: turning to the king, his royal highness thanked his majesty for his education; adding, that he was now called to a responsible office, and was anxious to advise his majesty to the utmost of his abilities. He then remonstrated with great force against many abuses in the late administration of affairs, particularly on the irregular mode of issuing orders from the cabinet, and not from the different boards of government. He continued, that, conscious of his own inexperience, he could not advise his majesty to any effect, to the

BOOK
IX.

glory of the crown, or the advantage of the nation, unless the privy council consisted of those persons who possessed his confidence, and the confidence of the people. That, in the present instance, neither himself or the nation could place any confidence in the persons then in power; he therefore requested the king to dissolve the present privy council, and to appoint in their place count Bernsdorf, and such other persons whom he took the liberty of recommending. He hoped also, and he trusted, that his majesty would also issue an order, that no edict should be valid, unless it was signed by the king, and countersigned by himself. At the conclusion of these words, which he uttered with great firmness and moderation, he laid the appointment of the new privy council before his majesty, intreating him to sign it.

The members (except baron Schach Rathlow, who alone was acquainted with the prince's determination) were so petrified with astonishment, as to be incapable of making any resistance. But when the king appeared intimidated and hesitating, one of the members rose, and said, "Sir, his majesty cannot sign such papers without due consideration," and endeavoured at the same time to snatch them from the prince's hand. The latter replied with some heat, but with great firmness and dignity, "Sir, it is not your business to advise his majesty on such occasions, but mine, who am heir apparent, and am responsible to the nation for my conduct;" and again tendering the papers to the king.

king, his majesty signed them instantly. The papers were sent by a confidential messenger to the chancery, and registered accordingly.

CHAP.
III.

The privy council being thus dissolved on the first time of their assembling in the king's presence, the prince himself announced the change to the queen-dowager in terms of the highest respect.

Throughout the whole transaction, the conduct of the young prince was remarkable for a discretion and secrecy extremely uncommon in a person of his age. Being discontented with the queen-dowager, he had first entered into a secret correspondence with count Bernsdorf, when he was scarcely more than fourteen years of age; and had continued it near two years, sometimes by letters, and sometimes by messages, and received from him instructions in what manner he should proceed. While engaged in this business, he entered into another correspondence with M. Schach Rathlow, who had the principal share in procuring the dismissal of count Bernsdorf, but was now displeased with the persons in power, and made private offers to the prince without being acquainted with his secret correspondence with Bernsdorf. The prince carried on this double intrigue under the direction of count Bernsdorf, in whom he implicitly confided, without being suspected by his preceptor Sporen, or by his governor, general Eiksted, so hackneyed in the intrigues of courts, and even lulled the suspicions of the queen-dowager: for her majesty, in a conversation which she held with him about a week before the

event, taxed him with holding a secret correspondence unknown to her; to which he returned an evasive answer with such unconcern and serenity, that he entirely removed her suspicions.

Thus a boy not sixteen years of age duped veterans in court intrigues, by pretending to be entirely friendly to the queen-dowager's party, and to acquiesce in the nomination of the new privy council, at the moment he was determined to remove them.

It adds to the wonder of the transaction, that the project was entrusted to above ten persons, and that not one of them betrayed the smallest symptoms which could create suspicion.

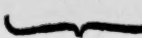
Every measure which prudence dictated was adopted on this important occasion. General Hut had assembled the guards in order to force the privy council to compliance, if the members should make any opposition; and the governor of the citadel was prepared to admit the prince within the fortress, if affairs had not turned out to his wishes. Fortunately the courage and address of the prince, and the popularity of his cause, rendered these precautions unnecessary.

The prince treated with great mildness all those persons whom he removed from their places. He conferred on the ex-minister Guldberg, a pension of * 5000 rix dollars, and appointed him governor of Aarhus, a species of honourable banishment. He nominated Steman governor of Hadersleben; at the same time

* 1000*l*.

assured

assured him, that he was convinced of the fidelity with which he had discharged his office of treasurer; adding, that if he could not sufficiently reward him, he would amply provide for his children.

CHAP.
III.


The principal persons who acted as the prince's confidants, and who have since filled the principal offices in court and state, were, M. de Schach Ratlow, Count Bernsdorf, Count Shimmelman, General Hut, and M. de Bulow, then gentleman of bed-chamber, and now marshal of the prince's court.

The only foreigner who is supposed to have had any knowledge of the transaction, was Mr. Elliot, who had left Berlin to come to Copenhagen in the capacity of British envoy; and the king of Great Britain was the first sovereign to whom the prince royal communicated his success.

C H A P. IV.

Excursion to Hirsholm, Fredericborg, Friedensberg, and Fredericswerk.

BOOK
IX.

THE shortness of my stay at Copenhagen during my first tour, and the earliness of the season, prevented me from making any excursions in the environs of Copenhagen. My second tour in 1784, afforded me an opportunity of gratifying my curiosity: an agreeable expedition to the palaces of Hirsholm, Fredericborg, and Friedensberg, and to the iron founderies of Fredericswerk, will form the subject of the present chapter.

Hirsholm, a royal palace begun by Christian the Sixth, and finished by his queen Christina Sophia, is a large quadrangular building of brick stuccoed white, surrounded by a moat, and placed in a very low and marshy situation. The suite of apartments is princely, but almost totally without furniture, as they have not been inhabited since the imprisonment and exile of queen Matilda, who made it her favourite residence. The dining-room is a very large apartment, and remarkable for a *jet d'eau*, and twelve fountains, which spouted from the sides. The gardens are formal, and full of *jets d'eau*. The place is so entirely neglected, that the court-yard is covered with weeds, and the moat is a green mantled pool.

Orders

Orders were lately received to put the palace in repair for the residence of the prince royal, who in all things seems to show an affectionate attachment to the memory of his mother.

In the gardens is a summer-house, which used to serve as a temporary theatre for the diversion of queen Matilda, and her company; and in another part is a wooden building called a Norway-house, containing landscapes of Norway in relief, and imitations of rocks, with wooden cottages perched on them, and wooden roads. Near this building the walks are not unpleasantly carried through the grounds in the English style of gardens.

The road from Hirsholm to Fredericborg winds agreeably, through a very beautiful and undulating country, richly clothed with forests of beech, birch, and oak, and enlivened by small lakes in the recesses of the wood.

Fredericborg was built by Christian the Fourth, and was so called in honour of his father Frederic the Second. It is an enormous and motley mass of building, partly of red brick, and partly of stone, partly Gothic, and partly in the Grecian style of architecture. It is built round three courts, each of which is surrounded by moats, and joined by bridges. The principal façade is full of niches, containing bad statues. In the inner court are two stories of seven arcades, constructed with stone painted black, and pillars of dark Norwegian marble. This appendage contrasting with the red brick presents a most strange effect, while a profu-

BOOK
IX.

fion of gilding and maffy fculpture diffigures rather than adorns the building.

The fituation of this pile, on the banks of a fmall lake, is not unpleafant. The palace contains a large collection of pictures, in great confufion, among which I obferved a few not unworthy of notice. The Crucifixion of our Saviour, by Andreas Peters, a Danifh painter, in the reign of Chriftian the Fourth. The three following were brought from Italy, by Frederic the Fourth : Saul and David, after the death of Goliah, by an unknown hand ; Abraham and Melchifedec, by Caravaggio, displaying the ftrong contraft of light and fhade, and that vulgar nature, which characterifes the works of that capricious painter ; Jonas preaching to the Ninevites, by Salvator Rofa, the figures as big as life, and in the fineft ftyle of that great mafter ; feveral tolerable paintings of the Flemifh fchool, chiefly fcriptural hiftories.

One of the apartments contains a fuite of the imaginary portraits of the kings of Denmark, before the converfion of the Danes to the chriftian religion. In another room, I obferved the whole length figures of the kings of Denmark of the houfe of Oldenburgh, beginning with Chriftian the Firft, and ending with Chriftian the Fifth, all originals. Of thefe the portrait of Chriftian the Second is the moft ftriking, as it exhibits a fine expref-
fion of that melancholy, feverity, and cruelty, which formed fo large a part in the character of that deteftable tyrant. A head of his queen Ifabella, fifter of the emperor Charles the Fifth, re-
minded

mind me of her mild and amiable qualities ; of the meekness and patience, and yet dignity with which she supported the harshness and infidelities of her obdurate husband in the time of his prosperity ; of the extreme attachment which she shewed to him in the hour of his disgrace ; of her unwearied attentions to soothe his disappointment, and to rouse him from his despondency ; of her refusal to accept a very honourable and advantageous settlement offered by the states of Denmark ; and of her noble answer, " That she had rather live with her husband in banishment, than reign without him *." She survived his deposition only three years, and died in the palace of Ghent, in 1526. Anne of Denmark, sister of Christian the Fourth, and queen of James the First. Several of Charles the First, one in his princely robes, when a boy about fifteen ; and another by Vandyke, when he was a young man.

The chapel is a very handsome apartment, but more remarkable for its costliness than for its taste. The walls are hung with the escutcheons of the knights of the Elephant, the first order in Denmark ; as those of the gallery are with the escutcheons of the knights of the order of Danebrog.

The palace of Friedensberg, about four miles from Fredericborg, is by far the most delightfully situated ; it stands at a small distance from the lake of Esserom, a piece of water about fifteen

* Mallet, Hist. des Dan, v. 2. p. 277, 4to.

BOOK
IX.

miles in circumference ; the ground gently sloping to its banks, and adorned with large forest trees. I scarcely ever beheld a situation more capable of improvement, and wished for a disciple of Brown to lay out the ground. But this beautiful situation is spoiled (if it can be spoiled) by cut yews, strait walks, a profusion of statues and triumphal arches, where nature and simplicity are expelled ; for in those parts, on the opposite side of the lake, where nature is left to herself, nothing can exceed its beauty and picturesque scenery.

The palace is a brick building stuccoed white, consisting of a front, and two wings. It was built by Frederic the Fourth, and called Friedensberg, or the mansion of *Peace*, because it was finished in 1720, when the peace was concluded with Sweden, after a long war which had desolated both countries. As a memorial of this event, a wooden pillar, painted like marble, and a small statue of Peace, are erected in the area before the palace, more expressive of the satisfaction with which Frederic gave peace to his subjects, than of his taste in architecture. It bears the following inscription *, *Paci statuam, arcem, quodque reliquum fuit vitæ, dedicavit Fredericus Quartus, 1720* ; a promise which the monarch inviolably kept during the remainder of his reign, and which reflects the highest honour on his memory, as his spirit of enterprize and undaunted courage had given him a passion for war. From this period he had

* To peace, this statue, palace, and the remainder of his life, were dedicated by Frederic the Fourth, 1720.

leisure to attend to the internal regulations of his kingdom, and to form useful establishments, particularly the foundation of several country schools which endears his memory to his countrymen.

Nothing more is wanting to render Friedensberg a most delightful spot, than to remove the cut hedges, level the terraces, to permit the forest trees to expand and to grow ; in a word, to leave nature to herself.

In the garden is a very curious assemblage of statues, placed regularly on a circular terrace of earth rising one above the other. These statues are of stone painted white, and represent the Norway peasants habited in their various dresses.

We did not attempt to request the permission of seeing the palace, as it is now inhabited by the queen dowager, Juliana Maria ; the place of her majesty's retirement, since the prince royal has taken into his hands the administration of affairs.

Early the next morning we quitted the village of Friedensberg, where we found a very neat inn, with comfortable accommodations ; and returning by the palace of Fredericborg, passed on to Fredericswerk, near the Ise-fiord, a bay of the sea, on the northern shore of Zealand, where general Claussen has established various manufactures, a foundery for casting cannon, and other works, for the purpose of supplying the Danish army and navy with military stores.

The general, to whom we had a letter of recommendation, re-

ceived us with great cordiality and politeness, and accompanied us over the works.

General Claussen established these works in 1756, upon the expectation of a Russian war, when the government was but scantily supplied with military stores. He fixed upon this spot as the most convenient for water to turn the mills; gave in his proposals to government, which were instantly accepted, and completed the works, notwithstanding numerous obstacles.

We embarked with the general upon a canal, which forms the communication between a small lake, and the Ifefjord, or bay of the sea. This cut was begun in 1717, by command of Frederic the Fourth, in order to prevent the inundations of the lake from overflowing the royal estates; and from thence the place was called Fredericswerk. It was finished in 1720, but as the soil was a light sand, and the banks were cut in a perpendicular, and not in a sloping direction, they fell down, and choaked the canal for a space of 500 feet. The general found it therefore necessary to new form the canal. He cut through several parts above 70 feet in depth, sloped the banks, covered them with earth, and in some places with sea-weed, fastened by means of the branches of fir, in order to prevent the sand from being drifted away. He then planted the slopes with willows, alders, elm, and oak, which he was obliged to water every day for a year. By these means the plants thrived, and now clothe the high banks to the edge of the water.

In

In the same manner he has planted the adjacent country for the space of several miles, which was either a morass, or covered with drift sand. Frederic the Fourth had in vain endeavoured to fertilize this waste; for when he thought he had succeeded, the sand in one year drifted over many miles; and in some places, to the astonishing height of 80 foot. General Claussen, however, has succeeded, and has shewn that ingenuity is of more avail than the power and riches of absolute sovereignty. By fixing the sea-weed into the ground with the fir branches, he has rendered the soil stable, and has fertilized, at great labour and expence, a desert of several miles. Thus, a tract of country, which before only fed two and thirty cows, now yields, besides a large quantity of wood for fuel, in a favourable season, above 500 loads of hay.

At the extremity of the canal, we turned into another formed entirely by the general. It was cut through quicksands, and the banks sloped and planted like those of the former. He employs at present only 340 men. All the workmen are his own peasants, who of course labour at a reduced price. He has built for their habitation rows of houses with rude stones washed with stucco, made of equal quantities of the pounded scoria of iron, of quicklime, and chalk. He has found from experience, that this stucco is extremely durable. His works consist of a foundery for casting cannon, both copper and iron, and balls, making saltpetre and gunpowder, with bake-houses and breweries. He boasted, that in 1772 he furnished the army of
Norway

BOOK
IX.

Norway with artillery in three months; and at two months notice he could supply a 50 gun ship, with all her artillery, ammunition, and military stores. In shewing us his works, he laid claim to many new inventions. He saws and polishes cannon, by means of a mill so contrived as to answer various purposes; he saws off the waste pieces of copper from the cast cannon, which operation was the work of sixteen men for three days, and is now performed in an hour. By means of the same mill, and a kind of turning machine, he polishes the cannon in the manner of turning, which used to be done by the tedious operation of filing. He has invented a simple machine to twist the hot iron bars together for anchors; a mode which he prefers as stronger and better than the usual method of hammering the bars together. In his powder-mills he uses copper mortars, which are much safer than those of wood, as the latter, on being much used become dry, and harbour the powder in the small crevices. He employs two ranges of mortars in each row, or sixty-four in each powder-mill, wherein usually only twenty are used, and he beats only ten pounds of powder with each mortar. The expence of copper mortars is very considerable, as each mortar costs twenty pounds; but then the mills are certainly less liable to accident; and if blown up, the mortars are again recovered.

On taking leave, the general pressed us much to stay and dine with him; but we excused ourselves, as we were under the necessity of reaching Elsinoor, and were engaged to dine the next day with Mr. De Conig.

In

In our way to Elfinoor, we stopped at a small village, and expected to find no provision for our dinner. But we were astonished at seeing the table covered with some cold provision, and four bottles of tokay, which the general had secretly ordered his housekeeper to deliver to our servants.

CHAP.
IV.

CHAP.

C H A P. V.

*Island of Huen—Biographical Memoirs of Tycho Brahe.*BOOK
IX.

FOR the purpose of visiting the small isle of Huen, celebrated for the residence of Tycho Brahe, we embarked at See Lust on board of a five-oared boat belonging to Count Shimelman, and in about two hours and an half landed upon the island.

Huen lies about six English miles from the coast of Zealand, and three from that of Sweden, nine from Elfsnoor, and fourteen from Copenhagen. It formerly belonged to the Danes, but was ceded to the Swedes at the peace of Roschild in 1658, and has since continued subject to that power.

This little island is six miles in circumference, contains a scattered village, one church, which is a pretty object, upon the north-west coast, about 50 houses, and 250 inhabitants. It produces hay, and every species of corn, more than sufficient for interior consumption. The inhabitants keep 200 horses, 150 cows, 400 sheep, and the same number of swine. The island pays, in quit-rent and taxes to the king, about 150*l*.

We landed upon the south-west part of the island in a small bay, just below the place where a stream, which is supplied by numerous pools and fish-ponds, falls into the sea. We ascended

ended the shore, which is clothed to the bottom with short herbage, crossed the stream, and passed over a gently waving surface gradually sloping towards the sea, which might be converted into a beautiful lawn, and walked about a mile to a kind of farm-house standing in the middle of the island, and inhabited by Mr. Schaw, a Swedish gentleman, to whom the greatest part of the island belongs. He lives here in summer, but in winter resides at Landsrona. This dwelling is the same as existed in Tycho Brahe's time, and was the farm-house belonging to that astronomer. Having first paid our compliments to Mr. Schaw, we obtained from him a guide to conduct us to the remains which lie near Mr. Schaw's house; they consist of little more than a mound of earth which inclosed his garden, and in the middle of that inclosure a deep pit, where stood the house of the astronomer, called Uranienburgh, and near it another deep hollow, the site of Stiernberg, or his observatory. From this delightful spot, the highest point in the island, we enjoyed a noble prospect; on one side, the coast of Zealand, stretching from Copenhagen to Elsinoor, the two extremities of the view; the shores gently sloping, embrowned to the margin of the water with rich wood, and beautifully sprinkled with villages and villas; on the other side, we traced the rocky and almost naked cliffs of Sweden, ornamented with the distant spires of Landsrona, Lund, Malmoe, and Helsingborg, and to the north a boundless expanse of ocean, its undulating surface covered with innumerable vessels sailing in all directions. I trust that a

BOOK
IX.

few biographical anecdotes of the Danish astronomer, who has rendered this little island remarkable in the history of literature, will not be unacceptable to the reader *.

Tycho Brahe, descended from a noble and illustrious Danish family, was born in 1546 at Knudstorp, a small lordship near Helsingborg in Scania. His father, Otto Brahe, having a large family, Tycho was educated under the care and at the expence of his uncle, George Brahe, who, having no children, adopted him as his heir. Finding his nephew a boy of a lively capacity, and though only seven years of age strongly inclined to study, he had Tycho instructed in the Latin tongue unknown to his father, who considered literature as inglorious, and was desirous that all his sons should follow the profession of arms.

In the twelfth year of his age, Tycho was removed to the academy of Copenhagen; and his mind, which had not yet taken any direction, was casually incited to the study of astronomy by an eclipse of the sun, which happened on the 21st of August, 1560. He had for some time examined the astrological diaries or almanacs, which pretended to predict future events from the inspection of the stars; but when he observed that the eclipse happened at the precise time at which it was foretold, his admiration was lost in astonishment; and he considered that science as divine, which could thus so thoroughly understand the

* For the life of Brahe, I have consulted chiefly Gassendus's *Equitis Dani Tychonis Brahe Astronomorum Coryphæi vita*; Jossenus de *vitâ et morte*

Tych. Bra. Orat. Funebris; and Hoffman's *Portraits Hist. des Hommes Illust. des Dannemark*, article Brahe.

motions of the heavenly bodies as to foretel their places and relative positions. From that moment he devoted himself to astronomy.

CHAP.
V.

In 1562 he was sent to Leipzig for the purpose of studying civil law; but he gave to the law only those hours which his tutor's importunity wrested from him, devoting the greatest part of his time to his favourite science; and as his tutor continually remonstrated against those studies which took off his attention from the law, to which he was destined by his uncle, he conceived an unconquerable disgust for that profession, and more assiduously, though secretly, continued his astronomical pursuits. For this purpose he laid out all the money which his uncle allowed him for pocket expences in the purchase of astronomical books: having obtained a small celestial globe, he took the opportunity, while his preceptor was in bed, of examining the heavenly bodies, and before a month had elapsed, he made himself acquainted with all the stars which at that time appeared above the horizon.

Inspired with the same ardent zeal in pursuit of his favourite science, he learned geometry and mathematics without a master, and invented a radius, and several mathematical instruments.

Having passed three years at Leipzig, he was preparing to pursue his travels through Germany; but the death of his uncle obliged him to return to his native country, in order to superintend and settle his estates, which he largely inherited. Instead of finding himself encouraged and esteemed for the wonderful

BOOK
IX.

progress, which at his early age he had made in the science of astronomy and its concomitant studies, he was mortified at being treated with contempt by his relations and acquaintance for following a science which they considered as degrading, and who reproached him for not pursuing what they called the more noble study of the law. Disgusted at their behaviour he settled his affairs, and hastened his departure from a country wherein he met with repeated mortifications, and before a year had elapsed set out upon his travels. He proceeded to Wittenberg, and afterwards to Rostoc, where an accident happened which had nearly occasioned his death.

Being invited to a wedding feast, he had a dispute with a Danish nobleman relative to some subject in mathematics; and as they were both of choleric dispositions, the dispute ended in a duel. In the conflict part of Tycho's nose was cut off. In order to remedy this defect, Tycho contrived a supposititious nose made of gold and silver, which he fastened by means of a glue, so artfully formed, it is said, as to bear the appearance of the real member, and to deceive many who were not acquainted with his loss.

From Rostoc Tycho continued his travels, and prosecuted his studies in the principal towns of Germany and Italy, and particularly at Aufburgh, where he formed an acquaintance with the celebrated Peter Ramus, invented and improved various mathematical instruments, superintended the building of an observatory at the expence of the burgomaster Paul Hainzell, after a plan communicated by himself, and formed a series of astronomical observations

observations and discoveries, which astonished and surpassed all who had hitherto been considered as the greatest proficient in that science.

CHAP.
V.

On his return to Copenhagen, in 1570, he was soon disgusted with the necessity of going to court; and, importuned with innumerable visits and interruptions of his studies, he removed to Herritzvold, near Knudstorp, the seat of his maternal uncle, Steno Bille, who alone of all his relations encouraged him to persevere in his astronomical labours. Steno assigned to his nephew a commodious apartment, and a convenient place for the construction of his observatory and laboratory.

During his residence with his uncle, Tycho, besides his astronomical researches, seems to have followed with no less zeal the study of chymistry, or rather of alchymy, from the chimerical view of obtaining the philosopher's stone, that he might amass sufficient riches to settle in some foreign country, where he might not be under the necessity of appearing at court, or having his studies interrupted by receiving and paying visits.

But neither his philosophy, or the unwearied zeal with which he prosecuted his studies, could exempt him from the passion of love. Being a great admirer of the fair sex, he conceived a violent inclination for Christina, a beautiful country girl, the daughter of a neighbouring peasant, and alienated his family by marrying a person of such low extraction. Love is ever ingenious in devising excuses. Our philosopher justified the choice
of

BOOK
IX.

of his heart, and gave many whimsical reasons for preferring a woman of low birth. He dreaded a wife who should be under the necessity of living at court, a life to him the most detestable; he therefore preferred one whose situation necessarily precluded her from what he styles a painful honour, who, grateful to her benefactor, would be dependent on himself alone, would be happy to accompany him in his travels, would consider a subserviency to his inclinations as a duty, and would not object to his continued application. Whatever effect these reasons might have in inducing our philosopher to marry, yet it may be imagined they had none on a proud family, who conceived themselves disgraced by Tycho's mis-alliance, and refused to hold any intercourse with him, until Frederic the Second commanded them to be reconciled. Tycho never seems to have repented of his choice; but ever found in his beloved Christina a grateful companion and an obedient wife.

About this period of his life he first appeared as a public teacher, and read lectures on astronomy at Copenhagen at the express desire of the king. He explained the theory of the planets, and preceded his explanation by a very learned oration concerning the history and excellency of astronomy and its sister-sciences, with some remarks in favour of judicial astrology, a study as congenial to the times as to the inclinations of our philosopher.

Offended with his relations, and disgusted with his countrymen,

men, he had long determined to quit Denmark, and to settle abroad; and after travelling through Germany and Italy, he at length fixed upon Basil; to the choice of which place he was influenced by the wholesomeness of the air, the cheapness of the living, and the celebrity of the university; and from whence he might hold a regular and easy correspondence with the astronomers of France, Germany, and Italy.

CHAP.
V.

On his return to Denmark he was preparing with the utmost secrecy to transport his library and astronomical apparatus, but was prevented carrying his design into execution by an unexpected summons from the king. Frederic, being secretly apprised of his intentions, was unwilling that Denmark should be deprived of so great an ornament, kindly embraced him, offered his protection and encouragement, presented him with the island of Huen as a proper retirement, and promised to erect, at his expence, whatever buildings and apparatus should be found necessary for his astronomical pursuits. He settled upon him a pension of 1000 crowns a year, and gave him a canonry of Roschild worth not less than 2000 crowns.

Tycho, astonished and transported at this instance of his sovereign's liberality, did not hesitate accepting the king's offer. He immediately repaired to the isle of Huen, and on the eighth of August, 1576, was present at the laying of the first stone of a magnificent house, which he afterwards called Uranienburgh, or the Castle of the Heavens.

This

BOOK
IX.

This castle was a square building of sixty feet, containing a large suit of apartments, an observatory, and a subterraneous laboratory; and although the king supplied 100,000 * rix-dollars, Tycho Brahe did not expend less than the same sum. He afterwards constructed a detached building for his observatory, which he called Stiernberg, or the Mountain of the Stars †.

In this retreat Tycho Brahe passed twenty years, and greatly improved the science of astronomy by the diligence and exactness of his observations. He maintained several scholars in his house for the purpose of instructing them in geometry and astronomy, some of whom were sent and their expences defrayed by the king; others, who voluntarily offered themselves, he received and supported at his own expence.

He did not, however, pass the life of an anchorite or a recluse; on the contrary, he lived in a most sumptuous manner, kept an open house with unbounded hospitality, was always happy to entertain and receive all persons, who flocked in crowds to visit the island, and to pay their respects to a person of his renown.

During his residence in the island of Huen, he received nu-^a

* 20,000 l.

† A plan of the island, and a curious engraving of these buildings and of the garden, is to be found in *Portraits Historiques des Hommes illustres de Danemarck*, under the article Tycho Brahe.

An engraving of Uranienburgh is inserted in the *Gentleman's Magazine* for November 1789, with explanations exactly similar to the engravings, and explanations in the *Portraits Historiques*, excepting that Stiernberg is omitted.

merous visits from persons of the highest rank. Among these must be particularly mentioned Ulric duke of Mecklenburgh, in company with his daughter Sophia queen of Denmark; William, landgrave of Hesse Cassel, whose correspondence with Brahe on astronomical subjects has been given to the public, and who had shewn himself a constant patron to the Danish astronomer.

In 1590 Tycho was honoured with a visit from James the First, then king of Scotland, when that monarch repaired to the court of Copenhagen to conclude his marriage with the princess Anne, and was so delighted with Brahe's apparatus and conversation, that he remained eight days at Uranienburgh. On retiring he presented Tycho with a magnificent present, and afterwards accompanied his royal licence for the publication of Tycho Brahe's works with the following flattering testimony of his abilities and learning: "Nor am I acquainted with these things
" from the relation of others, or from a mere perusal of your
" works, but I have seen them with my own eyes, and heard them
" with my own ears, in your residence at Uranienburg, during
" the various learned and agreeable conversations which I there
" held with you, which even now affect my mind to such a de-
" gree, that it is difficult to decide, whether I recollect them
" with greater pleasure or admiration; which I now willingly
" testify by this licence to present and future generations, &c."

His majesty also, at his particular request, composed, in honour of the Danish astronomer, some Latin verses, more expressive in-

BOOK
IX.

deed of his esteem and admiration than remarkable for classic elegance.

In 1592 he was honoured with a visit from his own sovereign, Christian the Fourth, then in the fifteenth year of his age, who continued some days at Uranienburgh. That promising young prince shewed great curiosity in examining the astronomical and chymical apparatus, expressed the highest satisfaction in receiving explanations and instructions, proposed various questions on several points of mathematics and mechanics, to which his majesty was attached, and particularly on the principles of fortification, and the construction of ships. He was also highly delighted with a gilt tin globe which represented the face of the heavens, and was so contrived, that, being turned on his own axis, it shewed the rising and setting of the sun, the motions of the planets and heavenly bodies; a wonderful contrivance for that age. Tycho, observing the delight which the young king shewed in observing these phænomena, presented it to his majesty. The king graciously accepted it, gave him in return a gold chain, and assured him of his unalterable protection and attachment.

Notwithstanding however these assurances, the king's youth was worked upon by those courtiers who were envious of Tycho Brahe's merit, or who had been offended by the violence of his temper, and the severity of his satire, and under various pretences prevailed upon Christian to deprive him of his pension, and the canonry of Roskild.

Tycho

Tycho Brahe being thus deprived of the means to support the great expences of his establishment at Uranienburgh, quitted with chagrin his favourite residence, and repaired to his house at Copenhagen, where he waited for an opportunity to retire from his native country. Having transported from Uranienburgh all the instruments and apparatus which could be removed, he quitted Copenhagen, embarked with his wife and family, landed at Rostock, and remained a year at Wanbeck with his learned friend Henry Rantzau.

Having dedicated a treatise on astronomy to the emperor Rhodolph the Second, who was extremely addicted to astronomy, chymistry, and judicial astrology, he at length received a very flattering invitation from that monarch, which he accepted without hesitation, and repaired to Prague in 1599. The emperor received him in the kindest and most honourable manner, built for him an observatory and elaboratory, settled on him an ample pension, and treated him with the highest marks of deference and respect.

In the service of Rhodolph he passed the remainder of his days, but did not live long to enjoy his protection. He had enjoyed a good state of health till the year previous to his death, when his constitution, somewhat weakened by the intenseness of his application, was still farther shattered by the chagrin occasioned by his removal from Uranienburgh. At that period he began to experience symptoms of complaints which announced his

BOOK.
IX.

approaching diffolution, but which he concealed as much as possible from his friends. He was reduced however to so low a state as to be affected with the most trifling circumstances, which he considered as prodigies, and would frequently interrupt his sallies of wit with sudden reflections on death.

The immediate cause of his decease was a strangury, which being attended with the most excruciating torments, brought on a violent fever, and a temporary delirium; in the midst of which he was heard repeatedly to cry out, "*Ne frustra vixisse videar* *." His delirium at length subsiding he became calm and composed, and perfectly sensible. Being extremely debilitated by the violence of his disorder, he perceived that he had not many hours to live. Accordingly he gave orders with the utmost coolness and resignation; even amused himself with composing an extempore copy of verses; sung various hymns; offered up prayers and supplications to the Supreme Being; recommended to his family and friends piety and resignation to the divine will; exhorted his pupils to persevere in their studies; and conversed with Kepler on the most abstruse parts of astronomy. Thus, amidst prayers, exhortations, and literary conversation, he expired so peaceably, that he was neither heard nor seen †, by any of those who were present, to breathe his last. He died in October 1601, in the fifty-fifth year of his age.

It is remarkable, that so sensible a man, and so accurate an ob-

* That I may not seem to have lived in vain.

† Tam tranquille ut nec deficere nec visus sit nec auditus.

Oratio Funebris, p. 27.

ferver as Tycho Brahe, should be so infected with the rage of system-making as to reject the simple and beautiful system of Copernicus, established by the most incontrovertible proofs, and to endeavour to reconcile the absurdities of the Ptolemaic system. He was, indeed, too well acquainted with the motions of the heavenly bodies, not to be sensible that the sun was the centre of the system; and though he was struck with the simplicity and harmony of the Pythagorean system, which Copernicus had lately revived, yet out of respect, it is said, for several passages in scripture, he absurdly endeavoured to reconcile (what were never intended to be reconciled) his learning with his faith: he rejected the diurnal rotation of the earth on its own axis; supposed that the earth was quiescent; that the sun, with all the planets, was carried about the earth in the space of a year; and that the planets, by their proper motions, revolved round the sun in their several periods; thus retaining the most absurd part of the Ptolemaic hypothesis, which makes the whole planetary system revolve round the earth in the space of every twenty-four hours.

Tycho, indeed, was so bigotted to his own hypothesis, and shewed, even in his last moments, such an attachment to his own system, as to desire his favourite scholar, the great Kepler, to follow his system rather than that of Copernicus.

If we were to estimate the merits of Tycho Brahe as an astronomer, we should compare the science as he left it with the state in which he found it. His great merit consisted in his inventions

BOOK
IX.

tions and improvements of mathematical instruments, and in the diligence and exactness with which he made astronomical observations for a long series of years. And as his instruments were remarkably good, he composed a catalogue of 777 fixed stars, all observed by himself, with an accuracy unknown to former astronomers. He likewise discovered the refraction of the air; demonstrated, against the prevailing opinion of those times, that the comets were higher than the moon; and from his observations on the moon and the other planets, the theories of their motions were afterwards corrected and improved*. He was also the first astronomer who composed a table of refractions, and shewed the use to be made of them in astronomy. Such is the reputation of Tycho Brahe, for his great proficiency in that science, that Costard, in his History of Astronomy, has fixed upon his name as marking the beginning of a new period.

He seems to have embraced a large circle of the arts and sciences. He cultivated poetry, and wrote Latin verses, not without some degree of classic elegance. He drew the plan for building the castle of Cronborg, and sketched the design for the noble mausoleum of Frederic the Second, which was executed in Italy, and is erected in the cathedral of Roskild. He dabbled also in physic. He was fond of being consulted, and readily gave his advice and medicines gratis to those who consulted him. He invented an elixir, which he calls an infallible cure

* See Bonnycastle's Introduction to Astronomy, p. 61.

for epidemic disorders, of which he has published the recipe in a letter to the emperor Rhodolph.

CHAP.
V.

He was a good mechanic. He possessed several automates, and took great delight in showing them to the peasants, and was always pleased if they took them for spirits.

He was no less fond of being consulted as a fortune-teller, and willingly encouraged an opinion, that his knowledge of the heavenly bodies enabled him to observe horoscopes, and foretel events. Many traditional fables of his predictions have been handed down to posterity, which shew his proneness to judicial astrology, and the weakness of those who believed his predictions.

In many instances astrological predictions, by alarming, occasion the event which they foretel, and have thus gained a false credit from the weak or the unwary. Thus Tycho Brahe's astrological predictions proved fatal to the emperor Rhodolph the Second: for, being informed by Tycho, that a star which presided at his nativity threatened him with some sinister designs to his prejudice, from his relations, he was thrown into such a panic, that he did not venture to quit his palace, or appear before any person; and, as the conduct of his brother Matthias confirmed the astrologer's informations, he fell at last a prey to his grief, and died 18th January 1612, aged fifty-nine years.

At Uranienburgh Tycho Brahe had several contrivances calculated to deceive and astonish those who came to visit and consult him. Among others, several bells, communicating with the

§

rooms

BOOK
IX.

rooms in the upper story, inhabited by his scholars, the handles of which were concealed in his own apartments.

Frequently, when company was with him, he would pretend to want something, and having secretly pulled the bell, would cry out "Come hither, Peter," "Come hither, Christian," and was pleased to observe the astonishment of the company, who not hearing the bells were surprized at the appearance of the person who was thus summoned.

He was no less devoted to the study of chymistry than to astronomy, and expended as much on the terrestrial astronomy, as he styles it, as on the celestial. He left, indeed, no writings upon that science, although it seems to have been his intention to have given to the public a selection of his experiments, which he had made with so much labour and expence; yet he adds, in the true cant of alchymy, "On consideration, and by the advice of the most illustrious as well as the most learned men, he thought it improper to unfold the secrets of the art to the vulgar, as few people were capable of using its mysteries to advantage, and without detriment."

His foibles were as prominent as his virtues and capacity. He was of a morose and unbending disposition, indulged himself in too great freedom of speech *, but while he rallied others was not pleased to be rallied himself.

He was greatly addicted to judicial astrology, and prone to a

* Nihil fictum; nihil simulatum in ipso; sed *scaphum scapham* appellabat; unde omne quod sustinuit odium.—Or. Fun. 269.

credulity

credulity and superstition below his learning and judgment. If he met an old woman in going out of his house, he would instantly return home; and considered an hare as an ill omen. While he lived at Uranienburgh he had a fool, whose name was Sep, who was accustomed during dinner to sit at his feet, and whom he used to feed with his own hand. This man was continually uttering incoherent expressions, which Tycho observed and noted down, from a persuasion that the mind, in a state of emotion, was capable of predicting future events; and he even believed, if any inhabitant of the island was taken ill, that this mad-man could predict whether he should live or die. He maintained, that the cabala and magic, if they did not act to the offence of God or man, could lay open many abstruse things by figures, images, and marks.

But to turn from the unfavourable to the brighter parts of his character, we may assent to the truth of the following eulogium given by his panegyrist; that to him his studies were life; meditation his delight; science riches; virtue nobility; and religion his constant direction*.

* *Ipsi vita studia erant; deliciae vero meditatio; divitiae scientiae; virtus nobilitas; religio directio.—Oratio Funebris.*

T R A V E L S
I N T O
S W E D E N.

B O O K X.

C H A P. I.

Landscrona—Lund—Carlsrona—Calmar—Jonkioping—Wadstena—Medvi—Nordkioping.

BOOK.
X.

JULY 20th. After expressing to Mr. Elliott our warmest acknowledgments for his polite and friendly attention to us, we quitted Copenhagen at four in the evening; embarked in a four-oared boat, and sailed to Landscrona with a favourable breeze. The distance is about sixteen miles.

On approaching Landscrona, we were embarrassed with shoals and rocks; and as the Danish watermen were unacquainted with the coast of Sweden, we could not disengage ourselves, and should have been compelled to return to Copenhagen, if fortunately

nately two Swedish sailors, observing our distress, had not waded through the sea, and conducted our vessel into port.

CHAP.

I.

Landscrona, a place of very little strength, is now strongly fortifying, and will become a fortress of great consequence, if the works should ever be completed. But it seems as if the Swedes, in all their undertakings, formed plans much too great and expensive for their finances and power; and consequently, that they seldom can finish what they begin. Such has been the fate of Carlscrona, Trolhætta, and Sveaborg; and, perhaps, Landscrona will furnish another instance of their attempting to execute what exceeds their revenue.

The object of the works now carrying on at Landscrona is to erect a fortress, which shall command the whole coast of Scania lying opposite to the Isle of Zealand, and to form a harbour for gallies.

The old fortress or citadel mounts seventy-four guns, and requires a garrison of two or three hundred men.

The harbour lies between the continent and a small island about half a mile in circumference, and is at least twenty feet in depth, and will form a very commodious station for the gallies.

This harbour is to be protected by a new citadel on the small island. For this purpose the island is encircling with walls and bastions of hewn granite. The works are very laborious and expensive; for the ground being a morass, the island must be drained by means of windmills, and the foundations of the fortifications and buildings be laid on piles. The town also, towards

the land, is encircling with an extensive range of fortifications, no less expensive and difficult than the former.

Being from former experience well acquainted with the mode of travelling in this country, we sent forwards our English post-chaise from Copenhagen to Stockholm, and purchased for ourselves two small peasant's carts, each provided with an arm-chair hung upon springs. In these vehicles we went usually at the rate of eight or nine miles in an hour, and not unfrequently travelled from eighty to a hundred miles in a day.

The regulations of the post are very excellent. At each post-house is kept a day-book or journal, in which each traveller sets down his name and character, the day and hour of his arrival and departure, the place from whence he came, and whither he is going, and the number of horses he requires. One column is appropriated to complaints; so that if the post-master is impertinent or imposing, his conduct is known, as the journal is every month inspected by the officers of government.

Lund, about twenty miles from Landskrona, and the capital of Scania, is esteemed the most antient town in Sweden, according to an old proverb, that when our Saviour was born, Lund was in its glory. The similitude of the genitive case Lunden, to the name of the English capital, has led some antiquarians to conjecture, that London derived its appellation from this place.

Lund contains scarcely more than 800 inhabitants, carries on but little trade, and is principally supported by its university, established by Charles the Eleventh, and called, from the name

of

of its founder, *Academia Carolina Gothorum*. There are twenty-one professors, and three hundred students. The library contains 20,000 volumes.

CHAP.

I.

The botanical garden is by no means in a flourishing state, the number of plants not exceeding 1200.

Lund is an archbishopric. The cathedral is an antient irregular building, raised at different intervals. The clerk did not omit to carry us into a subterraneous chapel, with a vaulted roof supported by grotesque pillars; on two of which are the figures of a man and woman carved in stone, stretching out their arms, as if they were attempting to pull down the pillars. These grotesque figures have given rise to the following legend:—A giant built the chapel, at the request of the first bishop, on condition that the latter should promise to give him either the sun and moon, his two eyes, or find out his name. When the building was nearly finished, the bishop, who had not yet found out the giant's name, walked in the environs of the town in great anxiety to a neighbouring eminence, and happened to hear the giant's wife call her husband by the name of Fin. Elated with this discovery, he returned to the town, and saluted the giant by his name. The latter was so enraged, that he endeavoured, with the assistance of his wife, to pull down the chapel; but in their first attempt they were turned into stones.

Our journey lay through Christianstadt, which I have mentioned in my former tour to Carlsrona. The variety of the country, the wildness of some of the views, the beauty of

BOOK
X.

others, the fertility of the small vallies, and the romantic appearance of the over-hanging rocks, formed a most pleasing and agreeable contrast. Although the basis of the soil is entirely granite, and vast fragments of rock overspread the face of the whole country, yet the superficies is principally green. In some parts juniper bushes over-run the soil, in others large forests of oak and pine start from the crevices of the rock, where there scarcely appears nutriment for the smallest vegetable. The vallies, numerous but small, abound with corn and pasture. It was hay harvest, every atom of soil was employed; and I observed several peasants making hay upon a slip of land, which could almost be covered with a sheet; and here and there a stone five or six feet high over-shadowing a *field* of corn.

An interval of five years had elapsed since my former * visit to Carlscrona, and I did not find the works advanced as much as I could have expected. Instead of building one dock every year, as was intended, only one has been finished in the space of nine years since the commencement of the undertaking; and as only two more were in the least forwardness, it will probably be a century before the plan is completed. The dock which is finished gives a complete idea of the expence and greatness of the plan. The bottom and sides are of hewn granite, rows of granite pillars support the roof, and bear rather the appearance of a colonnade to a temple, than a receptacle for ships.

* Book VII. c. xi.

In our route from Carlscrona to Calmar, we passed through large forests of lofty pines and firs, which were planted by the hand of nature, and scarcely intermixed with any other trees, excepting in the environs of the villages. These pines appeared extremely lofty in comparison with the narrowness of the road which winded at their feet, and was over-shadowed by the branches converging to, and almost touching, each other.

July 25. As we approached Calmar, we emerged from the gloom of the forest, and burst upon a fine view of the sea, with a distant prospect of the Isle of Oeland. The weather was delightful, the sea calm, and numerous vessels covering the surface of the waters to the farthest extent of the horizon, rendered the scenery as animated as it was beautiful.

Calmar, separated from the Isle of Oeland by a strait about seven miles broad in its narrowest part, is a small town scarcely a mile in circumference, but strongly fortified. The ramparts are at present unprovided with guns, which have been lately removed to Landscrona and Christianstadt, from the rumour of a Danish war. The streets cross each other at right angles. The town contains 450 houses. The inhabitants carry on a small trade, and possess, besides small craft, about seventy vessels, from 100 to 300 tons burthen.

Calmar is celebrated in the history of the north, for being the place where the deputies of the three kingdoms of Sweden, Denmark, and Norway, were appointed to assemble for the election of a king, according to the union of Calmar; an union as favourable

BOOK
X.

favourable to Denmark, as it was contrary to the interests of Sweden : it was upheld by the vigour and abilities of Margaret, but, under her weak and unwarlike successors, entailed upon Sweden a series of convulsions and troubles, until it was finally dissolved by the valour and prudence of Gustavus Vasa.

About half a mile from the town is the castle, standing on an eminence, the only remains of the antient magnificence of Calmar. The building has been constructed at different intervals, and contains a motley mixture of Gothic and Grecian architecture. I observed over one of the doors an inscription, John III. 1568. Parts of the mansion, however, are much older, as the apartment in which the deputies of the three kingdoms used to assemble still subsists : It is 94 feet long, and 30 broad. This palace, once the residence of the celebrated Margaret, and so remarkable in the history of this country, is now converted into a distillery.

Instead of proceeding by the direct road from Calmar to Stockholm, we made a circuit through the interior parts of Sweden, the provinces of Smoland and East Gothland, and passed through Jonkioping, Wadstena, Medvi, Linkioping, and Nordkioping.

In traversing Smoland, it was curious to observe the immense tracts of forests of pine and fir ; the approach to the villages, announced by groves of oak, beech, and birch; and the numerous plots or parterres of arable land among pastures and rocks. I have frequently observed an acre of ground laid out with alternative slips of rye, barley, flax, hemp, the intervals between and
around

around sown with grafs. I passed many spots in which the trees were cut down and burning in order to manure the soil, and render it fit for pasture or corn.

CHAP.

I.

An intelligent traveller *, speaking of the agriculture of Smoland, says, " I found a tolerable soil in Smoland, without sand or heath ; but the large detached stones and masses of granite with which it is overspread, render the greatest part unfit for the plough. In the crevices of these stones, and between the pines and fir, underwood grows rapidly.

" The peasants select a spot of ground in the midst of the forest, cut down the trees, strew them over the ground, and burn them when dry. They then dig the earth between the stones with a spade, sow and harrow it with rakes, and obtain a good crop of corn for two successive years. The ground is then converted into pasture, and is chiefly employed in feeding cattle, which, both in this province and Halland, thrive well, make a good appearance, and form an advantageous article of export. These spots of land thus converted are called *Swedja Land*, or burnt land, and in the space of fifteen years are again covered with wood. This mode of culture has been usually censured by many travellers, as very unprofitable and detrimental, but without sufficient reason ; for many of these spots cannot be used to any other purpose, being too stony, and the trees of little value."

* Professor Buesch, of Hamburgh.

BOOK
X.

Veils are commonly worn in Sweden, not only by the ladies, but even by the female peasants when at work in the fields; a custom which strikes an English traveller for its singularity, but which is useful in these parts, in order to shade the eyes from the glare of the snow in winter, and from the rays of the sun, so strongly reflected from the rocks, in summer.

As we approached Jonkioping, on the third day's journey from Calmar, the country became somewhat less foresty, and the views more extensive, though not less rude and rocky. About a mile from Jonkioping, we came to the top of an eminence, whose summit was covered with fir, and its feet with beech and oak. We looked down upon that town, lying beautifully between two small lakes, and at the southern extremity of the Wetter, a lake of an oblong shape, and of such length, that it appeared like an arm of the sea. It is at least 100 miles in length, and from six to twenty-six miles broad; its shores are gently sloping, and mostly clothed with firs.

Jonkioping is the capital of Smoland, and the seat of the parliament or superior court of justice for the kingdom of Gothland. The town is no more than two miles in circumference, and contains about 3000 inhabitants. The houses are mostly of wood, covered with turf. Excepting the houses in the largest towns, and gentlemen's seats, few of the buildings in Sweden are roofed with tiles. They are principally covered with turf or moss, no thatching being used, as both too dear, and dangerous in case of fire. In order to keep out the rain, large layers of
birch

birch bark are spread over the timber-work of the roof, under the covering of turf or moss. These turf roofs make a singular appearance, many of them producing herbage, which is occasionally cut for the use of the cattle. I observed a few ornamented with flowers.

In quitting Jonkioping, we coasted the western shores of the Wetter, through a hilly, stony, but well cultivated and woody country, the road sometimes running close to the margin of the water, sometimes carried over the steep precipices which form the shores of the lake. The vast expanse of water, which near Jonkioping is too uniform, was partly broken by an island about seven miles in circumference, and the view was diversified with a smaller lake.

The small town of Wadstena, on the borders of the lake Wetter, is remarkable for its castle, a singular building, defended at the four corners by round towers, covered with small domes. This castle was built in 1544 by Gustavus Vasa, and inhabited by his son Magnus, who was insane. The church, a large handsome building, contains his sepulchre, and the remains of Catharine, wife of Charles Canutson, and of Philippa queen of Eric the Thirteenth.

The lake Wetter, like all inland pieces of water surrounded with hills or mountains, is subject to sudden storms in the stillest weather. Superstition or credulity not unfrequently find causes for all phenomena of nature; and I was informed at Copenhagen, that these sudden storms on the lake Wetter were oc-

BOOK
X.

caused by a subterraneous communication with the lake of Constance, in Switzerland; for it had been discovered, by a regular series of correspondence and observation, that when the waters of one lake arose, those of the other fell in the same proportion; and that frequently the waters of the Wetter were violently agitated without the least wind, or any apparent cause, until information arrived, that at that very time the lake of Constance had been disturbed by a tempest. The person who gave me this information further added, in favour of this phenomenon, that similar plants were observed to grow spontaneously in the neighbourhood of each lake; and that the same fish were likewise caught in both lakes.

On my arrival at Wadstena I found a gentleman, to whom I had a letter, strongly impressed with the truth of this account, and particularly affirming, that a series of correspondence and observation had established its truth. But when I requested a specific proof, I found that his assertion was principally grounded on tradition; and that no correspondence on the subject had been carried on by any person now alive, but by the great-grandfather of some inhabitant of Wadstena.

I should not have thought this idle story worthy of mention, if the fact had not been positively affirmed by persons of some note at Copenhagen; if it was not the generally received opinion at Wadstena; and if some travellers had not been sufficiently imposed upon to relate it in their travels.

At Motala, we crossed the river of the same name, which issues
from

from the Wetter, and is not navigable for the smallest vessels, and soon arrived at Medwi, the Swedish Spa.

CHAP.
I.

Medwi is pleasantly situated in a gently waving and richly wooded country. The lodging-houses form one street of uniform wooden buildings painted red. The walks and rides are delightful, particularly to the banks of the Wetter. The waters of the Spa are vitriolic and sulphureous.

The regulations of this place seem more calculated for the accommodations of the sick who come to drink the waters, than for the company who assemble for pleasure. Between five and six in the morning the company are awakened by the ringing of a large bell, when they usually rise, drink the waters, breakfast, ride out, or walk. Precisely at twelve dinner is served in a large hall, to which all the company repair. After dinner they play at cards till five, when they take their afternoon's airing. At seven supper is served in the same hall; at nine the bell rings, the gates are shut, no carriages are admitted, and the company mostly retire to bed.

We had purposed passing a week at Medwi, but the season being past, and the company gone, excepting a few invalids, we continued our journey to Stockholm, through Linköping and Nordköping.

Having repassed the Motala, we ascended an eminence, and descended into the largest and most cultivated plain I had yet seen in Sweden, fertile in corn and pasture, bounded by a ridge of hills, whose sides and summits are prettily wooded, and whose
feet

BOOK
X.

feet were watered by the Motala, forming a succession of lakes. The plain is open, and the fields large; frequent churches, villages, and country seats occurred; and the scene was enlivened by the hay-harvest.

In the midst of this plain stands the small but neat town of Linköping. It contains the episcopal palace, the cathedral, and the palace in which resides the governor of East Gothland.

The axle-tree of one of our carriages breaking, we were detained here for two hours; and the night coming on, we were prevented from enjoying the beauties of the country, which appeared from the dim light of the stars more rocky and hilly as we approached Nordköping, where we did not arrive before one in the morning.

Nordköping is one of the largest and most commercial inland provincial towns in Sweden. It covers a large space of ground, being ten miles in circumference; but the houses are small and scattered, and the inhabitants do not exceed 10,000. Its situation on the Motala is exceedingly picturesque. That river flows through the town, forms a series of cataracts, and is divided into four principal streams, which encircle several rocky islands, covered with houses and manufactories. At the extremity of the town it is navigable for small vessels.

Several manufactories are established in the town; fifty-five fabrics of cloth, which employ 1500 men; three sugar-houses; one of snuff; fifty mills for grinding corn, which is exported in large quantities; and a brass foundry.

The

The fabric of arms mentioned by Mr. Wraxall no longer exists, the proprietor being a bankrupt.

CHAP.
I.

A salmon fishery gives employment and riches to many of the inhabitants.

A few miles from Nordkioping we ascended a high chain of granite mountains, which run from east to west; the stupendous masses of rocks impending over the road, highly picturesque, resemble the first Alpine passes in Switzerland. From the summit we looked down upon the rich plains we had passed the preceding day, and the Motala winding and flowing into the Bay of Brunick. On descending this chain, we traversed a succession of plains and rocks which stretch from north to south. The plains are exceedingly fertile in grain and pasture, and watered by numerous rivers and lakes. The villages are numerous, chiefly scattered at small distances from each other; groupes of two or three cottages placed on rocky eminences, and many churches standing singly, in the most picturesque situations, diversified the scenery.

At Filtja, the last post previous to our arrival at Stockholm, we admired a beautiful bay of the lake Maeler, bounded by perpendicular, rocky, and woody banks. The nearer we approached the capital, the more desolate the country appeared. It was almost entirely covered with rocks or forests, exhibiting scarcely any traces of human industry, excepting a few patches of corn and pasture in the midst

BOOK of the forest, and about a dozen habitations. This dreary
X.
scene continued till we ascended an eminence, and came
upon a sudden view of the spires of Stockholm, half hid by
the intervening rocks and trees.

CHAP.

C H A P. II.

Palace of Drotningholm—Gala Day at Court—Swedish Opera—Professor Sergell—Remarks on several late changes effected in the Government of Sweden.

DURING my former travels into these parts, I was prevented by the earliness of the season, and the difficulty of crossing the lake Maeler, from visiting the palace of Drotningholm; but in my second tour I had several opportunities of satisfying my curiosity.

CHAP.
II.

The palace of Drotningholm, the favourite residence of the king, is situated upon the island of Drotningholm or Queen's Island, in the lake Maeler, about ten English miles from Stockholm. The passage across the lake to the island is near a mile.

The palace was originally built by Hedwige Eleonora, queen of Charles the Tenth; but has been greatly improved and enlarged by succeeding sovereigns, and particularly by his present majesty, who has added a theatre, and several other buildings. The apartments are more comfortable than magnificent. The king's private library contains an useful collection of modern books. A cabinet of natural history adjoining to the library is small, but remarkable as having been arranged and described by Linnæus.

VOL. III.

M

The

BOOK
X.

The state apartments contain paintings of the battles of Charles the Eleventh, the coronation of that monarch, and the portraits of the principal generals who served under Charles the Twelfth, by Ehrenswald.

The garden* is chiefly laid out in strait walks, excepting a small part, which is called the English garden, and was forming in a fanciful imitation of our style.

In the midst of the garden is a spot called Canton, which has been too pompously described by many travellers. It receives that denomination from several buildings in the Chinese taste, disposed in a semicircular form, and erected by the late king: they contain several large Chinese figures, and vases of very valuable porcelain. In these apartments his majesty invites select parties to dinner and supper, when he lays aside his etiquette.

On the 8th we passed the whole day at Drottningholm, according to the tedious forms of Swedish etiquette, to which his majesty is so much attached. We set off full-dressed from Stockholm at

* The king has shewed a finer taste in the gardens of Haga, a villa belonging to his majesty, which have been laid out under his own direction in a style more resembling English pleasure-grounds, than any which fell under my observation abroad. The walks are carried by the side of a lake, and through the woods, by a gradual and gently-bending outline.

Haga, though a wooden building, is one of the king's most favoured villas, endeared to him as being the place where he consulted with his particular friends on the best means for effecting the revolution of 1772, and from which he took the title of Count de Haga, which he assumed during his travels.

*

eleven;

eleven ; and, as the weather was showery, the embarkation in the foreign minister's barge was rather disagreeable.

CHAP.
II.

We found the drawing-room crouded with company to congratulate the king on his late arrival from his travels. It was gala day, and we saw the court in all its splendor. The gala dress of the court for both men and women is blue silk and satin, with white lining and ornaments. The company appeared to a stranger as if they were habited for a masquerade.

After church the king made his appearance. His majesty wore a fancy dress of purplish silk, much embroidered with gold ; for the king, while he has limited his subjects to particular colours, assumes the liberty of varying his own dress with all the tints of the rainbow.

On my being presented, his majesty did me the honour to converse with me in the most gracious manner ; recollected having seen me before in Sweden ; talked to me of the docks of Carlscrona, and asked me if I had seen the dock of Toulon ; adding, " It is not for me to boast, but in my estimation " the works of Toulon are trifling in comparison with those " of Carlscrona. We do not boast of pictures and statues, but " we can shew the works at Trothætta, Carlscrona, and Svea- " borg."

Soon after he repaired to a large saloon, dined in public, with the queen and royal family, and conversed with the foreign ministers, who surrounded his chair. At two he rose

M 2

from

from table; and we dined with the great marshal, who keeps a public table on these occasions.

About half past five we were presented to the prince royal, who, although scarcely six years old, went through the forms of a drawing-room with wonderful ease and address for so young a person.

We afterwards repaired to the Swedish opera of Iphigenia in Aulis, translated from the French, and the words adapted to Gluck's music. The theatre is small but neat; the stage was well filled, and the piece well performed.

At the conclusion of the opera we embarked in a covered barge, crossed the water in the rain, got into our carriage, and arrived at Stockholm about midnight. Such is the necessary etiquette of the Swedish court; but the king contrives as much as possible to relieve the *ennui* of the day by the affability of his manners, and the vivacity of his conversation.

The present king has paid great attention to the literature and language of his native country. He has constructed, at a considerable expence, an opera-house in Stockholm, for the representation of operas in the Swedish language. The building is small, but well arranged, and will contain about eight hundred spectators. The ornaments, scenes, and decorations, are extremely rich and elegant. The troop, considering the recency of the establishment, will no doubt greatly improve, as the king loves and encourages theatrical representations, and has composed several pieces for the stage.

The

The polite arts have made their way into Sweden, and flourish under the king's patronage.

CHAP.
II.

Among the living artists who do honour to their country, must be mentioned Mr. Sergell, a statuary, who passed some time at Rome at the king's expence, and is now settled at Stockholm. His work-shop contained several statues and models, which prove his taste in seizing the spirit of the antique. I particularly admired a most elegant Cupid and Psyche; Otrides, in the agonies of death engraving upon his buckler, with the point of his lance, *Δι Τροπαιω*, "To the God of Victory," his countenance expressing a fine assemblage of pain, surmounted by courage; a bust of Gustavus Adolphus, round which the prince royal is entwining a wreath of laurel, in the true spirit of the antique.

Mr. Sergell is likewise employed in superintending and finishing the equestrian statue of Gustavus Adolphus in bronze, after the design of Archeveque, a celebrated French statuary, since dead. It is of a colossal size*, and represents Gustavus Adolphus, the favourite hero of Sweden, in complete armour, excepting his head, which is encircled with laurel; his right hand holds a truncheon pointing downwards. The hero sits well on the horse, and the animal has great spirit.

Mr. Sergell has added to the original design the figures of

* The following are its dimensions: height of the hero, if standing, fourteen feet; length of the horse, from the head to the crupper, ten feet. Figure of Oxenstiern, nine feet. Height, from the bottom of the pedestal to the top of the hero's head, forty feet; from the bottom of the horse's feet to the top of the hero's head, eighteen feet;

History,

BOOK

X.

History, pointing to an inscription on the pedestal; and Axel Oxenstiern, the celebrated chancellor, who was no less pre-eminent in the cabinet than his master Gustavus Adolphus in the field.

Mr. Sergell informed me, that the original plan of Archeveque was to represent a Victory on horseback, preceding and crowning Gustavus Adolphus on horseback; a sublime idea, bold, and perfectly new for a statue. The plan was at first accepted by the states, but afterwards altered, because it was thought impossible by the person employed to cast it. Mr. Sergell expatiated with great enthusiasm on the boldness and sublimity of this plan, and seemed by no means to consider it as impracticable.

Mr. Sergell has been lately employed by the king in executing a monument to the memory of Des Cartes, which is erected in one of the churches of Stockholm. Above is the medallion of Des Cartes, and beneath an angel taking a veil from the globe, and illuminating it with a torch; a sublime idea, simply expressing the effect of philosophy in enlightening the human race, but weakened by the angel's pointing to "Stockholm," written in golden characters. For the tomb itself sufficiently proved, that the philosopher died * at Stockholm; and the appropriation of the light of philosophy to a particular spot, substitutes what is partial and confined to what is general and comprehensive.

* His body was transported to Paris, and buried in the church of St. Genevieve.

The royal academy of painting and sculpture at Stockholm contains the finest collection of casts from the antique statues at Rome, that ever fell under my observation. These casts were the first impressions of the only moulds which were ever permitted to be taken from the antique statues. Louis the Fourteenth obtained that permission from the pope, and sent to Charles the Eleventh these casts, which are therefore uniques in their kind. They were given by the late king Adolphus Frederic to the academy of painting and sculpture, which he instituted.

The truth of the observation which I ventured to advance, that the king of Sweden is a limited and not an absolute monarch, though controverted by some authors, is still farther confirmed by the transactions of the diet which assembled in May 1786, in which several new regulations were settled, tending to limit the prerogative in the power of making, amending, and repealing laws, of removing persons from public employments, in the imposition of taxes, and the permanency of the revenue.

In regard to the first point, the power of making, amending, and repealing laws, it had long been a question of dispute, whether a bill being proposed by the king, if two houses were for it, and two against it, the decision should be left to his majesty: but it was finally resolved by the states, and agreed to by the king, that under these circumstances the proposed bill should not take place; and that when three houses were of the same opinion, that opinion should be considered as the sense of the states;

states; all questions of privilege and taxation excepted, in which the unanimous consent of the four houses should be requisite.

With respect to the second point, the power of removing persons from public employments, it was resolved that, whereas the king, in the second article of the form of government, promises not to ruin any man as to his life and honour, body or welfare, unless lawfully convicted and judged; under the word *welfare* are included public offices and employments: no man, therefore, can be deprived of any civil, military, or ecclesiastical employment, without previous trial or judgment, according to the laws of the land, excepting those public officers of state, and committees mentioned in the form of government, who are liable, as before, to be removed by the king.

As to the third point, it was decreed, that the subsidies voted at the preceding diet to remain in force till the next meeting of the states, should now be continued for four years only; and that one per cent. should be deducted; a deduction which, however small, was made in order to prove, that the grant of the extraordinary revenues depended entirely on the good pleasure of the diet, and that the revenue of the crown was by no means fixed and permanent. An important regulation, which almost renders it necessary for the king to summon the diet in four years, unless he can render (what is not possible) his fixed revenue equal to the public expenditure.

But as an additional proof that the king, by the revolution of

1772,

1772, was not despotic, it is only necessary to add, that he has lately obtained new prerogatives; and has effected, with the consent of the states, some changes in the form of government, which render him still more powerful.

CHAP.

II.

When the king was leading his army into Russia, and was preparing to besiege Fredericsham, which if he had taken he might have marched perhaps almost without interruption to the gates of Peterburgh, he was checked in the midst of his career by the revolt of several of his officers, who refused to pass the limits of Swedish Finland, under the pretence that the king had no power to carry on offensive war without the consent of the states.

A despotic sovereign would instantly have arrested and condemned the refractory officers to death, have appointed others in their places, and have continued his progress against the enemy. But the king, who was not despotic, arrested the officers, but sent them to Stockholm, to be tried according to the laws of their country, and immediately recalled his troops from the Russian territory.

Not long afterwards he convened the states, laid before them the motives which induced him to attack Russia, obtained from the majority of the four houses an approbation of his conduct, and supplies for the support of the war.

Convinced also from recent experience, that the king ought to possess the power of declaring offensive war, and of disposing of all military commissions under him, he proposed,

VOL. III.

N

under

BOOK
X.

under the title of the Act of Safety, several alterations in the new form of government. The three houses of clergy, burghers, and peasants, acceded to this act; but, as the nobles persisted uniformly in opposing it, and refused to register it as the sense of the states, the king ventured to arrest the principal persons in opposition; and summoning the states to his palace, he addressed the order of nobles in the following manner:

“ I have waited with every indulgence the issue of your long deliberations, in the hope that patience and reflection would at length overcome your opposition. I find, however, that this hope has proved fruitless; knowing that the interests of my subjects will not admit of any longer delay, and as the laws of the kingdom, and the resolutions of the diet in 1786, state that every future act, tending to explain the constitution (and such is the Act of Safety) should become a law by the plurality of the orders of the state, I consider that your president, Count Lowenhaupt, is fully competent to sign the act, in the name and on behalf of your order.”

Count Lowenhaupt immediately signed it.

These strong measures were not effected without the connivance of the three other houses; and the bulk of the people undoubtedly sided with the king.

The king has also still further extended his own prerogative, and diminished the influence of the nobles, by abolishing the senate, which, though deprived of its powers by the revolution
of

of 1772, was still considered as the principal support of the aristocratical interest, and was the great channel of political and judicial discussion. Instead of a body entirely confined to the nobles, and constituting the first supreme court of justice, and whose consent was necessary in order to render valid all acts and decrees of the crown, the king has appointed a new council, divided into two departments :

CHAP.
II.

1. Called the court of revision for judicial affairs, or the supreme court of judicature, without appeal, and consisting of six nobles and six commoners.

2. For matters of inferior œconomy, consisting of eight nobles and four commoners.

But even by these increased prerogatives, conferred on the crown by the Act of Safety, the king is still far from being a despot, because he does not possess, what I cannot but consider as the two great features of despotism, the power of enacting laws, and of imposing taxes. Though he now enjoys the prerogative of declaring war and making peace, yet as he cannot support a war without the grant of subsidies, and as he cannot lay on a single tax without the consent of the states, the declaration of war must be considered as a mere formality, and as ultimately depending on the approbation of the states.

It is not my intention to enter into a controversy, how far the powers possessed by the king of Sweden are too great for the sovereign of a free people ; or whether the states have acted inconsistently or unwisely in granting such an extent of preroga-

BOOK
X.

tive: thus much is certain, that the changes were effected by the consent of the majority of the states, and with the concurrence of the people at large; and that the same powers which acceded to the Act of Safety may, on some future occasion, limit the royal prerogative, if found to be too dangerous to the liberty of the subject. The king has but a small standing army; the greatest part of the troops consist of a national militia, who, instead of supporting him in any arbitrary measure, would be the first to oppose him. And as almost the whole body of the nobility, whom he has disgusted and lowered, watch his conduct with a jealous eye, and are ready to oppose his measures and molest his government, whenever he summons the states, the permanence of the king's authority ultimately depends on conciliating the three houses of the clergy, citizens, and peasants, and on the affections of his people.

C H A P. III.

Commerce of Sweden—A comparative View of the Exports and Imports for 1781—Revenues and Expenditure—Bank of Stockholm.

A General idea of the commerce of Sweden will be best found by a comparative state of the exports and imports for 1781. CHAP.
III.

E X P O R T S.

	£.	s.	d.
Copper plates, ordinary	22,308	11	11 $\frac{3}{4}$
Copper, refined	26,579	2	7 $\frac{1}{2}$
Hammered copper plates	90	13	0 $\frac{1}{4}$
Large copper plates	1,979	3	0 $\frac{1}{4}$
Old minted copper plates	42,798	1	3
Different sorts of copper	1,572	3	0 $\frac{1}{4}$
Brass	2	1	11 $\frac{1}{4}$
Brass wire	39,079	5	7 $\frac{1}{2}$
Brass kettles	0	11	8
Different sorts of brass	112	2	2 $\frac{1}{4}$
Iron anchors	2,343	10	10
Iron plates, tinned	1,079	16	11 $\frac{1}{4}$

Iron

BOOK
X.

			£.	s.	d.
Iron plates, not tinned	-	-	23	6	8
Iron cannons	-	-	9,799	0	10
Balls	-	-	194	16	8
Iron pots	-	-	104	3	7½
Different forts of smaller bar iron	-	-	30,556	14	7
Ordinary bar iron	-	-	524,104	11	4½
Iron plates	-	-	15,329	0	5
Steel	-	-	7,528	5	10
Steel wire	-	-	54	0	5
Nails	-	-	8,677	10	7½
Ditto, coarser	-	-	9,049	1	11½
Wrought iron of the finer sort	-	-	5,776	3	6½
Ditto of the coarser sort	-	-	14,954	3	1½
Different forts of iron and steel	-	-	620	17	1
Axle-trees	-	-	307	16	10½
Beams of fir	-	-	1,496	11	4½
Ordinary deals	-	-	53,029	0	10
Thicker deals	-	-	12,802	14	0½
Planks of the thickest sort	-	-	8,248	9	2
Lath	-	-	499	1	0½
Fir planks	-	-	208	8	9
Mafts	-	-	354	0	10
Rafters	-	-	23	1	0½
Thicker spars	-	-	79	15	8
Ditto, lesser sort	-	-	1,279	0	10

SWEDISH COMMERCE.

95

	£.	s.	d.
Laths	303	14	0 $\frac{1}{2}$
Staves of beech wood	227	13	2 $\frac{1}{2}$
Wood	421	0	2 $\frac{1}{2}$
Ditto, manufactured	153	6	3
Lumber	1,101	3	11 $\frac{1}{2}$
Different stones	4,027	4	0 $\frac{1}{2}$
Furs	297	10	11 $\frac{1}{2}$
Corn	588	11	6 $\frac{1}{2}$
Victuals	754	3	1 $\frac{1}{2}$
Herrings	84,453	1	8
Fish	286	9	10 $\frac{1}{2}$
Cattle	335	5	3 $\frac{1}{2}$
Sail cloth	4,054	10	11 $\frac{1}{2}$
Linen	124	1	1 $\frac{1}{2}$
Allum	9,954	6	0 $\frac{1}{2}$
Common ashes	229	16	8
Pot ashes	8,282	1	11 $\frac{1}{2}$
Pitch	32,354	2	1
Pitch oil	129	0	11 $\frac{1}{2}$
Chalk	4,476	15	3 $\frac{1}{2}$
Printed books	479	0	10
Guns and pistols	19	19	9 $\frac{1}{2}$
Herbs for dying yellow	12	6	8
Different sorts of cordage	104	5	10
Gunpowder	4	15	11 $\frac{1}{2}$

Different

CHAP.

III.

BOOK
X.

	£.	s.	d.
Different kinds of furniture	152	0	3 $\frac{1}{4}$
Beer	298	0	10
Earthen ware	1,099	14	0 $\frac{3}{4}$
Collothar, or brown red	407	1	3
Fish oil	47,546	1	11 $\frac{3}{4}$
Tar	96,546	18	2 $\frac{3}{4}$
Saffron	1,743	5	2 $\frac{1}{2}$
Watches	304	5	7 $\frac{1}{2}$
Vitriol	52	5	10
New-built ships	17,295	15	1 $\frac{1}{4}$
Baulks	745	15	0
Silks	1,570	6	11 $\frac{3}{4}$
Different goods	1,280	19	2
Salt	8,799	1	3
Oak staves	1,495	15	11 $\frac{1}{4}$
Wines	3,245	8	4
French brandy	335	0	10
Tobacco leaves	13,299	0	5
Tea	12,494	4	0 $\frac{1}{4}$
Oil of turpentine	99	16	8
White lead	37	5	10
Cochineal	1,995	14	0 $\frac{3}{4}$
Pepper	1,145	16	8
Sugar	154	15	3 $\frac{1}{4}$
Cinnamon	495	5	10
8			Nutmegs

S W E D I S H C O M M E R C E .

97

	£.	s.	d.
Nutmegs - - - -	154	16	11½
Mace - - - -	76	10	5
Hemp - - - -	174	12	9½
Flax - - - -	394	14	0½
Different other merchandizes - -	40,828	16	6½
Freights for exported goods upon Swedish bottoms - -	118,341	18	1½
Total of Exports -	£. 1,368,830	13	5

CHAP.
III.

I M P O R T S .

Silks - - - -	15,528	9	0½
Cambrick - - - -	1,598	12	8½
Muffin - - - -	618	6	6½
Indian cottons - - - -	4,859	3	0½
Different sorts of thread and linen -	14,449	9	5½
Printed cottons - - - -	6	1	4½
Cloth - - - -	23,952	0	0
Camphire - - - -	249	8	9
Galls - - - -	383	11	11¾
Amber - - - -	44	11	3
Liquorice - - - -	587	6	8
Vol. III. O Oil			

BOOK
X.

				£.	s.	d.
Oil (coarse)	-	-	-	9,658	16	1 $\frac{3}{4}$
Quicksilver	-	-	-	248	14	10 $\frac{1}{2}$
Turpentine	-	-	-	411	7	11
Wax	-	-	-	501	1	8
Tobacco in leaves	-	-	-	31,236	6	11 $\frac{3}{4}$
Tobacco	-	-	-	14,146	7	4 $\frac{3}{4}$
White lead	-	-	-	1,198	18	10 $\frac{1}{4}$
Brazil wood	-	-	-	744	11	0 $\frac{1}{2}$
Cochineal	-	-	-	2,122	15	5
Fernambuc	-	-	-	956	6	9 $\frac{1}{4}$
Indigo	-	-	-	7,751	11	1
Madder	-	-	-	2,436	7	3 $\frac{1}{2}$
Cream of tartar	-	-	-	746	17	4 $\frac{3}{4}$
Colours	-	-	-	13,994	11	8
Anchovies	-	-	-	273	11	1 $\frac{3}{4}$
Coffee	-	-	-	29,857	16	4 $\frac{1}{4}$
Rice	-	-	-	2,184	1	11 $\frac{3}{4}$
Paper	-	-	-	6,858	8	6 $\frac{1}{2}$
Linseed	-	-	-	996	16	6 $\frac{3}{4}$
Soap	-	-	-	874	2	1
Divers drugs	-	-	-	26,718	13	6 $\frac{1}{2}$
Annis	-	-	-	437	4	5 $\frac{3}{4}$
Cinnamon	-	-	-	224	19	2
Currants	-	-	-	282	17	8 $\frac{1}{2}$
Figs	-	-	-	1,254	1	0 $\frac{1}{2}$
			§			Ginger

SWEDISH COMMERCE.

99

					£.	s.	d.
Ginger	-	-	-	-	993	12	7 $\frac{1}{4}$
Almonds	-	-	-	-	2,486	18	0 $\frac{1}{4}$
Nutmegs	-	-	-	-	747	8	5 $\frac{1}{4}$
Mace	-	-	-	-	961	15	7 $\frac{1}{2}$
Cloves	-	-	-	-	224	1	8
Pepper	-	-	-	-	2,196	11	11 $\frac{3}{4}$
Raisins	-	-	-	-	5,028	14	2
Saffron	-	-	-	-	396	16	3
Plumbs	-	-	-	-	1,697	16	9 $\frac{1}{4}$
Different grocery wares	-	-	-	-	411	6	10 $\frac{1}{2}$
Sugar in powder	-	-	-	-	52,807	15	11 $\frac{1}{4}$
Different sorts of sugar	-	-	-	-	54,569	0	6 $\frac{1}{4}$
Pease	-	-	-	-	7,365	16	5 $\frac{1}{2}$
Wheat	-	-	-	-	19,728	15	0
Rye	-	-	-	-	205,829	4	8 $\frac{1}{4}$
Corn	-	-	-	-	34,028	6	11 $\frac{3}{4}$
Malt	-	-	-	-	44,775	7	1
Oats	-	-	-	-	3,479	6	4 $\frac{1}{4}$
Wheat meal	-	-	-	-	40	6	9 $\frac{1}{4}$
Gruaux	-	-	-	-	579	1	11 $\frac{3}{4}$
Different sorts of corn	-	-	-	-	1,025	17	2 $\frac{1}{4}$
Live cattle	-	-	-	-	8,195	3	7 $\frac{3}{4}$
Meat	-	-	-	-	2,198	11	3
Cheese	-	-	-	-	9,778	1	9 $\frac{1}{4}$
Hams	-	-	-	-	120	17	11

CHAP.
III.

O 2

Salt

BOOK
X.

	£.	s.	d.
Salt meat - - - -	781	16	8
Dry meat - - - -	52	13	2½
Butter - - - -	5,217	16	8
Tallow - - - -	14,297	6	4½
Fish of different sorts -	8,114	16	0½
Salt and dried fish - -	7,354	8	10½
Fruits - - - -	2,470	15	8¾
Lead - - - -	5,004	1	3
Printed books - - - -	2,804	0	3¾
Calamine - - - -	979	11	11¾
Feathers - - - -	217	18	1½
Hair - - - -	2,735	0	7½
Potters earth - - - -	1,808	15	5
Tin - - - -	4,280	6	11¾
Wax candles - - - -	819	0	10
Pit coal - - - -	5,293	0	5
Different goods - - - -	14,981	18	9
French wine - - - -	18,546	11	8
Rhenish wine - - - -	1,696	13	1½
Portuguese and Spanish wine -	1,998	11	3
Cider and vinegar - - -	737	4	9½
Wines, liquors, &c. - -	23,399	8	0½
Silk - - - -	24,779	0	10
Cotton - - - -	4,299	13	2½
Ditto thread - - - -	3,244	0	10
Ditto, worsted - - - -	1,731	1	8
3			Hides

SWEDISH COMMERCE.

101

	£.	s.	d.
Hides - - - -	11,824	0	0
Hemp - - - -	57,926	10	5
Flax - - - -	29,107	17	7 $\frac{1}{4}$
Polish wool - -	19,554	0	3 $\frac{3}{4}$
Spanish wool - -	3,029	4	10 $\frac{1}{4}$
Sole leather - -	12,327	10	10
Pot ashes - - -	100	5	7 $\frac{1}{2}$
Linen thread - -	2,818	5	11 $\frac{1}{4}$
Different rude materials -	18,886	17	7 $\frac{1}{4}$
East India goods consumed in Sweden -	10,810	2	6
Freight paid to foreign ships - -	6,301	0	2 $\frac{1}{2}$

CHAP.
III.

Total of Imports - £. 1,008,392 12 4 $\frac{1}{2}$

ESTIMATE

ESTIMATE of the COMMERCE of SWEDEN with the following Countries,
in the Year 1781.

	EXPORTS.		IMPORTS.		Balance in Favour of Sweden.		Balance against Sweden.	
	£.	s. d.	£.	s. d.	£.	s. d.	£.	s. d.
Denmark and Norway - -	160,063	11 6 $\frac{1}{4}$	66,595	10 11 $\frac{1}{4}$	93,468	0 7 $\frac{1}{2}$		
Dantzic - - -	22,358	3 11 $\frac{1}{2}$	33,246	3 0 $\frac{1}{4}$	—	—	10,887	19 0 $\frac{3}{4}$
England - - -	367,292	16 1 $\frac{1}{4}$	97,762	4 7	269,530	11 6 $\frac{3}{4}$		
France - - -	203,762	18 2 $\frac{3}{4}$	83,145	10 2 $\frac{1}{2}$	120,617	8 0 $\frac{1}{4}$		
Holland - - -	107,103	8 10 $\frac{1}{4}$	151,583	3 6 $\frac{1}{2}$	—	—	44,479	14 8 $\frac{1}{4}$
Königsberg and Prussia - -	49,689	2 4 $\frac{3}{4}$	67,580	2 4 $\frac{3}{4}$	—	—	17,891	0 0
Italy and the Mediterranean	82,166	6 10 $\frac{1}{2}$	33,170	3 0 $\frac{1}{4}$	48,996	3 10 $\frac{1}{4}$		
Pomerania (Swedish) - -	67,938	18 0 $\frac{1}{4}$	187,144	9 8 $\frac{1}{4}$	—	—	119,205	11 8
Portugal - - -	125,132	3 1 $\frac{1}{2}$	40,340	18 11 $\frac{1}{2}$	84,791	4 2		
Russia and Courland - -	58,229	12 8 $\frac{1}{2}$	202,781	4 4 $\frac{1}{2}$	—	—	144,551	11 8
Spain - - -	23,380	17 8 $\frac{1}{2}$	14,711	7 4 $\frac{3}{4}$	8,669	10 3 $\frac{3}{4}$		
Hamburgh, Holstein, &c. -	128,911	7 6	38,202	14 9 $\frac{1}{2}$	90,708	12 8 $\frac{1}{2}$		
West Indies - - -	873	8 6 $\frac{1}{2}$	—	—	873	8 6 $\frac{1}{2}$		
East Indies - - -	122	19 4 $\frac{1}{2}$	10,810	2 6	—	—	10,687	3 1 $\frac{1}{2}$

NAVIGATION

NAVIGATION to and from SWEDEN in the Year 1781.

CHAP.
III.

	Ships loaded.		Entered in Ballast.		Ships gone out loaded.	
	Swedish.	Foreign.	Swedish.	Foreign.	Swedish.	Foreign.
Denmark - -	357	18	—	1	368	11
Dantzic - -	141	2	—	—	97	1
England - -	88	87	8	8	235	77
France - -	50	5	—	1	155	4
Holland - -	37	1	—	—	53	1
Königsberg -	222	5	2	—	151	14
Mediterranean	53	—	—	—	43	
Pomerania - -	256	3	—	—	185	7
Portugal - -	142	—	—	—	68	14
Russia - -	509	10	—	—	524	19
Spain - -	10	—	—	—	13	
Germany - -	274	18	—	—	418	25
West Indies -	2	—	—	—	1	
East Indies -	—	—	—	—	—	1

RECAPITU.

BOOK
X.

RECAPITULATION.

	£.	s.	d.
In comparing the exports and imports for 1781, a balance in favour of the former is found, amounting to — — —	360,437	19	6½
To which is to be added the national gain by the East India commerce — —	61,111	18	10½
Freights gained in the Mediterranean by Swedish ships, according to the best and most authentic accounts, to — — —	50,000	0	0
	£. 471,549	18	4½

Silver, gold, and divers foreign coin imported this year — — — —	111,844	5	11½
Interest, provision, and brokerage for loans made or renewed abroad, as well as interest for the divers sums which Swedish merchants owe, and credit given them by foreigners on part of the imports of this year, amount, according to the most probable accounts, to — — — —	50,000	0	0
Annual presents to the powers on the coast of Barbary, and other expences relating thereto, as well as appointments and salaries of			

consuls

	£.	s.	d.	CHAP. III.
consuls in those places, and of the Swedish minister at Constantinople — —	13,189	18	1½	<u> </u>
Smuggling, and frauds in declaring the amount of the merchandizes at the custom-house -	125,000	0	0	
Balance in favour of Sweden —	171,515	14	4	
	£. 471,549	18	4½	

The revenues of Sweden amount to something more than £.1,000,000 sterling, but may, on an average, be taken at £.1,050,000 a year: they have been much augmented since the revolution in 1772, as they did not then amount to more than £.750,000, or at most £.837,500. In this £.1,000,000 however are not included the rents of land immediately assigned for the militia establishment and sailors, and for the pay or salary of the governors of provinces, and their officers; these rents, levied directly by those to whom they are assigned, amount at least to £.300,000 or £.350,000.

The chief articles of Swedish revenue are as follow :

	£.	s.	d.	
Rents of land — — —	146,250	0	0	
Capitation — — —	56,250	0	0	
Duties on export and import —	154,166	10	0	
VOL. III. P	Extraordinary			

BOOK
X.

	£.	s.	d.
Extraordinary taxes granted by the states —	30,416	10	0
The brandy, being a regale — —	41,541	10	0
The post office — — —	19,000	0	0
Stamped paper — — —	12,250	0	0
Tythes on corn — — —	19,500	0	0
Ditto on iron, copper, filver, allum, brim- stone, vitriol, mines, and lime furnaces —	16,812	10	0
The royal lottery — — —	17,750	0	0

And above twenty or thirty other smaller articles, which amount however to about £. 500,000.

The expences were regulated in 1773 to answer exactly the revenues; but they have ever exceeded them, and there is a considerable annual deficiency, which has not hitherto been made up otherwise than by loans or anticipations, and must oblige the king to call the states, in order to find means to extinguish that increasing debt, by any new resources which may make the revenues more adequate to the expences *.

The average expences amount to 4,753,126 rix-dollars, or £. 1,188,281. 10s.

* The diet of 1788 granted a loan towards liquidating the debt occasioned by the annual deficiency, gave supplies for carrying on the war, and laid on additional taxes; namely, six per cent. on house rents; eight per cent. on all places from ten rix-dollars, or 2*l.* 10*s.* to 100 rix-dollars, or 25*l.* per ann.; on titles; and three copper dollars, or 10½*d.* on each window-light.

The

S W E D I S H E X P E N C E S .

107

The chief articles of expenditure in the year 1784, were,

CHAP.
III.

	£.	s.	d.
1. The king's court, including that of the queen - - - -	78,756	10	0
2. The military, viz. the garrison regiments, the militia not included - -	70,336	5	0
3. Ammunition for ditto - - -	26,791	15	0
4. Clothing ditto - - -	24,500	0	0
5. The artillery - - -	16,548	10	0
6. The navy, the new buildings included -	118,138	10	0
7. The fortresses and engineers - -	19,701	0	0
8. The galleys, &c. being separate from the navy - - - -	25,699	10	0
9. Towards the expences of the king's travels	50,000	0	0
10. Ships new building, extra - -	35,316	10	0
11. Annual sum of extraordinaries left to the king's own disposition, according to the form of government - - -	25,000	0	0

Amongst numerous smaller articles that make up the rest of £.1,188,281. 10s. the whole of the expences, I note the following :

	£.	s.	d.
1. Drotningholm - - - -	5,129	10	0
2. The prince royal - - -	2,700	0	0
P 2			
3. The			

BOOK
X.

	£.	s.	d.
3. The king's stables - - -	4,755	0	0
4. The prince royals stables - - -	612	5	0
5. Income of prince Charles - - -	12,034	0	0
6. Income of prince Frederic Adolphus - - -	4,375	0	0
7. The princesses - - -	6,647	0	0
8. The - - -	4,927	0	0
9. The guards - - -	11,931	15	0
10. The life dragoons - - -	6,143	5	0
11. The senate - - -	14,583	5	0
12. The parliament of Stockholm - - -	5,080	5	0
13. Pensions and gratifications - - -	7,937	15	0

All that has been said hitherto about the finances relates only to Sweden, Finland and Pomerania not included: Pomerania is entirely separated in the accounts and estimates, as its expences are to be defrayed from its own revenues; but Finland, though separated from Sweden in the yearly estimates, is, however, supported by the Swedish revenues, out of which about £.12,500 annually make up the deficiency in the Finland revenues: this deficiency arises chiefly from the great expences occasioned by the fortrefs of Sveaborg, the military, and the gallies. The revenues of Finland amount to £.100,000 per annum, and its expences to £.112,500; to which must be added the rents of land consigned to pay the militia, governors, &c. which may amount to between £.25,000 and £.30,000 sterling.

R E C A P I -

RECAPITULATION.

CHAP.
III.

The revenues of Sweden	-	-	£. 1,050,000
of Finland	-	-	100,000
of Pomerania	-	-	50,000
The rents of lands in Sweden	-	-	300,000
in Finland	-	-	25,000
The total income of the Swedish			
revenues amount to	-	-	£. 1,525,000

This sum, in case of necessity, might be considerably augmented, partly by new taxes granted by the states, those now paid being very moderate; partly by free gifts from the bank of Sweden, out of its annual profits, which are considerable, but cannot be disposed of without the consent of the states.

The bank of Stockholm owes its origin to Mr. Palmshut, a merchant, who carried on a very extensive trade, and possessed great property in iron mines. He established at Stockholm a bank for the purpose of exchanging and lending money, divided into two departments for those different purposes. As he was the only banker at that time in the kingdom, his correspondence was very extensive; and his credit was so well supported by his private fund, and the profit of his iron works, that the notes which he issued at the interest of eight per cent. for a term of ten years and upwards, were circulated through the kingdom,

dom, and received as ready cash by the trading part of the nation.

But in process of time, several counterfeit notes being issued, many of his debtors refusing either to reimburse the capital or to discharge the interest, the goods and pawns upon which the money was lent being too numerous to be disposed of to advantage, and the proceedings of the courts of law too dilatory, the bank was drained of cash, and its credit in danger of sinking into disrepute.

In this dilemma Mr. Palmshut applied to Charles XI. explained the general state of his bank, proved that the fund was by no means deficient, but that unless he could recover what was due he should be in danger of becoming bankrupt. He intreated, therefore, the king to take the bank under his royal direction; and demonstrated, that by certain regulations the money could be recovered, the accounts settled, and the losses entirely repaired.

The king approved the proposal, took the bank under his own protection, and appointed Palmshut director.

His majesty having established the credit and security of the bank, transferred the direction to the states of the kingdom assembled in 1688, declared himself and his successors protectors of the bank, but renounced all interference or influence in disposing of the money, under any pretext. The states being thus declared guarantees, proprietors, and directors of the bank, several regulations were made, of which the following were the principal:

That

That the bank should lend money upon good security, at the interest of eight per cent. and should pay for all money borrowed only six per cent.; that the debtors should discharge interest upon interest, but that the bank should not pay interest upon interest; that all the king's revenues should be deposited in the bank, but without receiving any interest. The bank was empowered to issue notes not exceeding the value of thirty-six dollars copper mint, or 10 s.; and it was finally resolved, that the states, or those whom they should depute, should have the power of inspecting the accounts, and of inquiring into the nature of its constitution. By these regulations the credit and riches of the bank increased to that degree, that towards the close of the last century it became the universal depository of the whole kingdom, both as to public and private circulation, and lowered the interest from eight to seven per cent. and afterwards to six, four, and three per cent. In return, the interest for all money borrowed, or deposited in the bank by way of loan, was likewise lessened from six to four and an half, three, and two per cent.

The large quantity of copper money then current in the country being by reason of its bulk and weight extremely inconvenient, rendered the circulation of bank notes advantageous to trade and commerce.

The bank supplied Charles the Twelfth with such considerable sums from 1714 to 1717 that the revenues arising from the tolls and customs were insufficient to pay the interest, and there was a considerable deficiency.

These supplies greatly diminished the public opinion in favour of the bank, and would have undermined its credit, if the king, upon the remonstrance of the states, had not mortgaged certain revenues of the crown, for the purpose of discharging the interest. His majesty at the same time declared, that all the revenues then mortgaged should remain in the hands of the bank, until the debt should be fully discharged; and promised, that he would not, on any pretext or emergency, have again recourse to the bank for money, except for such as belonged to the crown. By this step the credit of the bank was in some measure retrieved; but its stock was too far drained to repair entirely its former credit, until Baron Goertz undesignedly contributed to it by a scheme in every other respects detrimental to the nation. In order to supply Charles with money for his constant wars, Goertz hit upon the following despotic expedient: He compelled persons first, by means of fines and penalties, and afterwards by a species of torture, to deliver up their plate, jewels, and coin. In return for these effects they received copper currency, called *myntellen*, or signs of coins, each weighing only one-third of a styver, but passing for a silver dollar, or ten pence, of which it was only a 96th part.

The public finding their property thus forcibly torn from them, and receiving no other equivalent than a debased currency, which fell short of its nominal value, secretly transferred their plate, jewels, and money, to the bank, relying on his majesty's solemn promise, that the bank should be exempted from the interference

terference and inspection of the crown. Baron Goertz, considering this mode of proceeding as fraudulent to the crown, endeavoured to prevail upon his majesty to seize the money and effects deposited in the bank; but the king not only positively refused to break his royal word, which he had solemnly pledged to his people, but even forbade Goertz from laying before him any proposals that might tend to the prejudice of the bank.

In this crisis of affairs the bank received such large sums of money, great part of which, being placed for security, paid no interest, that the profits were very considerable. This flourishing state of affairs induced the bank, by order of the states, in 1741, to present the king with a donative of 100,000 silver dollars, or £.8,333.4s. and to furnish him with 500,000, or £.41,666, without interest, towards carrying on the war against Russia. Since that period it has frequently advanced large sums of money to the crown and to the board of manufactures, by order of the states.

The bank is divided into two departments, the one called *Læne* or loan, and the other *Wexel* or exchange bank, each keeping its accounts as separate as if they were two distinct establishments, but each mutually supplying the other as occasion requires.

The loan bank lends money upon mortgages or pledges in the following manner:—Gold and silver in block, copper, brass, and *lænæ bank sedlar*, or certificates of having lent money to the bank, being considered as nearly the same value as ready money,

the proprietors, on depositing those pledges in the bank, receive the full value, on the payment of three per cent. annual interest.

Formerly jewels were received as pledges; but as the bank was once considerably defrauded in that article, and on account of their fluctuation in value, they are no longer admitted.

As iron is a principal article in the exports of Sweden, and as the working of the mines is attended with considerable expence, and the sale of the iron uncertain, the bank receives that metal as a proper security for a loan. The iron being duly appraised, and lodged in the public warehouse, the proprietor receives three-fourths of its value at the interest of three per cent.; and when he can find an opportunity to dispose of his iron, it is again delivered to him, on producing a certificate from the bank that the loan upon it is duly discharged.

Mortgaged lands and houses, being of a less certain value, pay an interest of four per cent. on the money borrowed; and for the purpose of liquidating the debt the following regulations were adopted:

All borrowers upon mortgaged lands and houses shall pay six per cent. yearly: of this sum four per cent. is the lawful interest; and the remaining two per cent. is annually deducted from the capital; by which means the original debt is annually diminishing.

The *Wexel* or exchange bank exchanges and issues bank notes, discounts bills, receives and assigns the money deposited for interest

interest or security, and discharges the interest of two per cent. on all money placed in their hands.

CHAP.
III.

Towards the latter end of the reign of Adolphus Frederic, the bank notes were issued in such large numbers, and many of them at so low a value as 1 s. 6d. that scarcely any specie was left in the kingdom; the bank was so drained of cash as not to be able to exchange its notes but in copper money, and paper was almost the only currency.

For the purpose therefore of preventing a total bankruptcy, with which the nation was threatened, and calling in and paying the paper currency, the states in 1766 voted a loan of 3,000,000 rix-dollars, or £. 750,000, to effect the realization of the bank notes, and to circulate a sufficient quantity of specie.

As a farther security against the encroachments of the crown, a former regulation was confirmed, that the bank should annually advance to the king £. 250,000 for the revenues of the current year, and should repay itself from the revenues of the subsequent year; but that no more money should be lent to the crown under any pretence whatsoever.

Many schemes calculated to restore the credit of the bank being counteracted by party, the diet in 1772 consigned to the king the difficult province of realizing the bank notes, and reforming the currency, which his majesty happily effected.

In 1777 and 1779 the states confirmed the realization effected by the king, and made several new regulations in relation to the

Q 2

bank,

bank, which tended to secure its credit, and rendered it still farther independent of the crown.

The principal regulations were as follows: That only £.250,000 should be annually lent on estates, above what was already advanced; that the estates already mortgaged should, on failure of the payment of one year's interest at the appointed time, be immediately sold by auction, the debt to the bank discharged, and the remainder paid to the proprietors; that the loan on the mortgaged estates should not be continued when the said estates were sold or transferred without the consent of the bank; and that on the succession or transfer of such estates two per cent. of the mortgaged property should be paid to the bank.

The independence of the bank on the crown was still farther established by the diet of 1784, which settled the following regulations:

A committee of revisors was appointed for the purpose of superintending and inspecting the accounts. This committee consists of a certain number of persons chosen by the three houses of nobles, clergy, and burghers, from their respective orders, who continue in office till the meeting of a new diet, when they are either renewed or confirmed. They assemble once every three years, and continue sitting not more than a month. They inspect the general state of the bank, compare the accounts of the directors, and observe that no abuses have been committed, and that the regulations of the states have been followed.

But as by the new constitution the calling of the states entirely depends upon the will of the king, and as a great length of time might elapse in the intervals of the diet, it was carefully provided, that the crown should not have the smallest part in the appointment of a vacant revisor's place. The mode of election is as follows :

Of the nobles the vacant place is filled by the remaining noble revisors, and by certain deputies nominated by the house of nobles at the diet, who continue electors until the meeting of the next diet.

On a vacancy among the ecclesiastical revisors, the clergy of Stockholm notify the vacancy to the consistories in each province, and appoint the day of election. The new revisor is chosen by the majority of the several consistories.

On a vacancy among the revisors of the order of burghers, the magistrates of Stockholm notify in the same manner the vacancy and day of election to all the borough towns ; which likewise choose the new revisor either by deputies or letters.

C H A P. IV.

Palace of Gripsholm—Strægnetz—Tombs of Stenö Sture, and Charles the Ninth—Trolhätta—Bobus—Gotheborg—Herring Fishery—Marstrand—Uddevalla.

BOOK
X.

THE palace of Gripsholm was a monastery of Carthusians, given to that order by Stenö Sture; but as the friars refused an asylum to Gustavus Vasa in his distress, the latter claimed it as the patrimony of his family, and made it the favourite place of his residence. The present king, being enamoured of a place which was honoured with the presence of his great ancestor, has lately improved and furnished it, and usually passes here some months in the year.

The palace is a Gothic building, and stands on a small island of the Mæler, overlooking or rather impending over the water. Its ancient battlements, and four irregular round towers covered with copper, convey an idea of those ancient castles mentioned in romances; and the recollection, that it was the favourite residence of Gustavus Vasa, impressed us with additional awe and reverence.

This palace contains a curious collection of portraits: Amongst others I particularly noticed Christopher the Third; Margaret, the Semiramis

Semiramis of the North; and Eric of Pomerania; Steno Sture, junior, administrator of Sweden; several portraits of Gustavus Vasa, particularly one painted by his son, the unfortunate and accomplished Eric the Fourteenth; the treacherous Arnold Peterfon, who received and endeavoured to betray Gustavus Vasa, and his wife, who preserved him; Catharine, the beloved consort of Eric the Fourteenth, pale and delicate; Gustavus, son of Eric the Fourteenth, who died in Russia; he is represented in chains, and his countenance conveys a fine expression of melancholy; John the Third; Charles the Ninth; and Oxenstiern, the celebrated chancellor.

A large hall contains thirty-four whole length portraits of the European sovereigns contemporary with Gustavus Vasa. Among the most conspicuous I remarked the emperor Maximilian the First; Sigismund the First, king of Poland; the emperor Charles the Fifth, and his brother Ferdinand; Louis, king of Hungary; our Elizabeth, in the bloom of her youth, and much prettier than she is usually represented; and Eric the Fourteenth, painted by himself.

The new saloon is hung with portraits of the present sovereigns of Europe.

We were shewn a small apartment, in which John the Third was confined ten years by his brother Eric, and in which Eric also was afterwards imprisoned by order of John.

The king has built an elegant theatre, in which plays are occasionally represented during his residence in this spot.

Strægnetz,

BOOK
X.

Strægnetz, fourteen miles from Gripsholm, is a small town on the banks of the Maeler. That lake never appears a large expanse of water, but is divided into numerous bays or inlets, which seem like so many detached lakes. Its surface is interspersed with rocky islands, and its perpendicular banks are covered to the water's edge with hanging groves; but the eye is tired with the tedious uniformity of the firs and pines, which form almost the only trees that fringe its banks, or overspread its islands.

The cathedral, a large red brick building, with a square tower roofed with copper, contains the sepulchres of the administrator Steno Sture the elder, and of Charles the Ninth.

The sepulchre of Steno Sture is a sarcophagus of marble, ornamented with a sword, helmet, and buckler.

His body was formerly buried in the monastery of Gripsholm: when that monastery was abolished, at the introduction of the protestant religion, it was removed to the parish church of Kermbo, and in 1577 conveyed in state to this cathedral, by order of Charles the Ninth, then duke of Sudermanland.

Time had mouldered his tomb, and his remains were not distinguished by any memorial, until the sepulchre which now covers his ashes was erected by the present king. His majesty considered it as a national reproach, that no tomb or inscription should be erected in honour of a man, who, in the capacity of administrator, directed the helm of state during thirty turbulent years, and supported the rights of his countrymen against the repeated invasions of the Danes; who gave to his country equal laws;

laws ; and, no less eminent for his protection of letters, founded the university of Upsala.

CHAP.
IV.

The tomb of Charles the Ninth stands near the altar, on it is the equestrian figure of the king in complete armour, the same which he is said to have worn in his life-time.

Although the transcendent merits of Charles the Ninth are eclipsed by the superior qualities of his father and son, yet, even as the son of Gustavus Vasa, and father of Gustavus Adolphus, he seems to shine no less with native than with reflected lustre.

Compelled from necessity to take up arms in conjunction with John, and to assist in deposing Eric the Fourteenth, yet he behaved to his unfortunate brother with humanity and deference, opposed and condemned his assassination, and openly remonstrated against the indignity offered to his remains.

The life of Charles the Ninth was almost a continued struggle against civil commotions and foreign invasions ; yet amidst those foreign and domestic troubles his whole administration was respected at home and abroad. He had long been the real, while Sigismund, who chiefly resided in Poland, was the nominal, sovereign ; until the unanimous voice of the nation deposed the weak and bigotted Sigismund, and raised Charles to the throne of Sweden ; a measure so well conducted as not to appear effected by his own private intrigues, but rather the result of national affection and national necessity.

Charles, in his conduct as king, fully answered the sanguine expectations of his people. He was enterprising, yet cautious in

VOL. III.

R

war,

BOOK
X.

war, sagacious and decisive in the cabinet, a friend to humanity, yet severe in the punishment of crimes. Attached by principle to the protestant religion, he supported with firmness its declining cause, against the persecutions of John and Sigismund, and raised it, almost drooping, again to pre-eminence.

Zealous to promote the interests of his people, he built towns, encouraged commerce and agriculture, and patronized letters. Of quick and lively feelings, he was subject to violent but short transports of passion, which harassed his frame, and finally occasioned his death. He died in 1611, in the sixty-first year of his age, leaving the commerce, finances, and army, in the most flourishing state, and, a most invaluable legacy to his country, his son Gustavus Adolphus.

From Strægnetz I passed through Örebro, Arboga, Lidköping, Trolhätta, and Gotheborg, of which places I have already given a cursory account *.

I found the works at Trolhätta very little advanced since my former visit to this place, in March 1779. A new plan is formed for cutting the intended canal through the precipitous rock of granite which forms the banks of the Gotha; a plan more practicable and less expensive than the former, for the lowest depth of rock to be excavated is twenty feet; but a large dam is to be made 120 feet high, and 20 thick. Of this projected canal only a square of about sixty feet had been executed.

The deficiency of Polheim's original plan, in attempting to

* See Book VII. c. ix. and x.

make the sluices near the channel of the Gotha, was experienced last year ; for the dam which stopped the water above Ekerbrad cut was overthrown by the violence of the river, and the waters burst through the cuts of Ekerbrad and Polheim, and would have destroyed the sluices if they had been constructed.

CHAP.
IV.

From Trolhætta we sailed down the river Gotha, passed through the sluice at Aker, and disembarked at the sluice of Edit, which was so nearly completed, that the navigation from the Wenner to Gotheborg may now be considered as uninterrupted.

Having examined the sluice of Edit, we crossed the Gotha, disembarked at a small village, and continued along the western shore of the Gotha, through a very wild and rocky country, intersected with vallies of corn and pasture. We passed through Kongshall, now a small village, consisting of one street of wooden cottages, at the bottom of a ridge of barren rock, formerly said to have been the residence of the antient dukes or kings of Norway.

We stopped at Bohus to examine the fort of that name, standing on a rocky eminence in the Isle of Bohus, encircled by two branches of the Gotha. This fort was formerly celebrated in the history of Norway, as a place of considerable strength, and forming the frontier fortrefs between Sweden and Norway, during the constant wars in which the Danes and Swedes were engaged.

It was a wooden fortrefs before the invention of gunpowder,

R 2

but

BOOK
X.

but in 1448 was rebuilt with stone by Christian the First. Its situation is very strong : it contains a garrison of a hundred men. From its summit we commanded a view of the Gotha winding at the feet of the most barren rocks.

During the few days which I passed at Gotheborg, in my second excursion to Sweden, I obtained the following information concerning the herring fishery, which forms a very important part of the trade carried on at Gotheborg, and has been the occasion of considerably increasing the population of the town.

The herrings frequent these coasts of Sweden in the month of November, when the fishery begins, and though it continues scarcely three weeks, yet supplies during that short space to the fishermen of Gotheborg about 600,000 barrels.

As the coasts in these parts are extremely rocky, and the sea is sprinkled with innumerable islands, the way of catching the herrings is as follows : Eight boats, manned each with two or three fishermen, draw one large net, enclosing a shoal of herrings, into a creek or small bay, and the fish are shovelled on the shore into considerable heaps. Of the 600,000 barrels caught in this manner 200,000 are salted, and from the remainder train oil is extracted. Fifteen barrels of herrings yield one of oil, which is principally exported to Holland and Spain.

A barrel of herrings sells, upon an average, for 1*s.* 3*d.* and when salted from 8*s.* to 10*s.* These fish are not so fine as those caught and cured by the Dutch, but being much cheaper, are preferred by the Russians and Poles. The salt is procured from Spain ; and one
barrel

barrel of salt cures three barrels of herrings. Upon an average, we may estimate the exportation of salted herrings at 150,000 barrels, and the inland consumption of Sweden at 50,000.

CHAP.
IV.

The fortifications of Gotheborg are so weak, and its garrison in general so small, that in 1788 it must have fallen into the hands of the Danes, who, under the pretence of an alliance with Russia, attacked the Swedes, and marched from Norway to the gates of Gotheborg, if the foreign powers had not interfered.

The king of Sweden hurried from Dalecarlia, where he was animating the natives to arm in his defence, to Carlstadt. There he was met by Mr. Elliot, the English minister at the court of Denmark. Gustavus having accepted the mediation of England, Prussia, and the Hague, Mr. Elliot undertook to stop the further progress of the Danish army; an event which he fortunately accomplished at the very instant the Danish troops were taking possession of Bohus, and were within a few hours march of Gotheborg. Mean while the king repaired to Gotheborg, arrived at the gates so unexpectedly, and at so late an hour, that he had the greatest difficulty in gaining admission; and the Danish herald, who the next morning summoned the town to surrender, was surprised on being introduced to the king, and informed by his majesty, that the citizens would defend their ramparts to the last extremity. But neither the presence or courage of Gustavus, who infused new spirit into the inhabitants, could have saved Gotheborg, if Mr. Elliot had not stopped the progress of the Danish army. The first armistice, concluded under the mediation and guarantee of the English minister, was only for eight days, but was afterwards prolonged for a month, when he signed

BOOK
X.

the final convention at Uddevalla for the evacuation of Sweden.

The prince of Hesse retreated into Norway; Gotheborg was saved from pillage, Sweden from dismemberment, and Europe from a general war.

This successful event, obtained without expence of blood and treasure, was the prelude to still more important negociations, by which the neutrality of Denmark was established, and the king of Sweden left to make those vigorous and astonishing efforts to support the independence of his own crown, and to restore the balance of power in the north.

From Gotheborg we made an excursion to Marstrand, a small island in the Cattigate, which for its strength is called the Gibraltar of Sweden, and which, being declared a free port during the late general war, was remarkable as being the place of resort for the American vessels.

Having changed horses at Kongshall, we proceeded through a rocky country to Kiulthal, a single house, inhabited by a custom-house officer, where we embarked, and rowing through small bays and creeks, amid barren rocks and crags, we arrived in two hours at Marstrand, one of the most extreme of those clusters of islands which extend in such numbers from the coasts of Sweden.

Marstrand is a rocky island, about two miles in circumference; the town, which lies on the eastern side, contains about 160 houses, and about 1,200 inhabitants. It was declared a free port in 1776, and was the great resort for the American vessels trading to these parts, who were not permitted to enter into any other port of Sweden. The traffic carried on by these means

enriched the town, particularly in 1780 and 1781. Since the peace the commerce has greatly diminished, and the inhabitants now chiefly subsist by the herring fishery, by the number of ships which in bad weather take refuge in the harbour, and by a contraband trade.

Previous to 1781 the inhabitants obtained considerable profits by smuggling brandy into Sweden, the importation of which was entirely prohibited in the other ports; but as the same privilege of importing foreign spirits for the purpose of exportation has been lately granted to Gotheborg, Marstrand has lost great part of its contraband trade.

Marstrand is called a *free port*, but its exemption is merely imaginary; for although all goods are admitted into the town free of duty, yet they cannot be exported from thence without paying the usual customs. Above sixty custom-house officers are established, and carefully examine all vessels at the time of their departure: we underwent a very strict search.

The harbour is extremely secure and commodious, but of difficult entrance, and in tempestuous weather dangerous, without a pilot of the place. It is capable of containing 200 vessels, and of sufficient depth for the largest.

Each of the two entrances which lead into the harbour are commanded by two new batteries. That on the north side, which is quite finished, mounts 10 guns of 24 and 36 pounders, and could contain in time of war a garrison of 150 men. The south battery, which was not yet mounted, will be capable of containing 300 soldiers. The place is still further fortified by the strong

BOOK
X.

strong citadel of Carlstein, which stands on an eminence in the middle of the island. It was built in 1682, by Charles the Eleventh, and was taken by the Danes in 1719; but its fortifications have lately been so considerably strengthened, that it is now deemed impregnable. On the top of the highest tower is a light-house, from which I commanded a most extensive view of the Cattegat, sprinkled in the adjacent parts with so many rocks and islands as surprized me from their astonishing number—

“ Thick as th’ autumnal leaves that strew the vale

“ Of Valombrosa *.”

The numerous rocks and shoals render this sea so extremely dangerous, that, according to an accurate computation, above 300 vessels annually take refuge during stress of weather in the harbour of Marstrand. It was a pleasing reflection to see these rocks covered with the huts of fishermen, and to consider, that the industry of man had rendered such barren spots the nurseries of many families by the profits of the herring fishery.

Having gratified our curiosity at Marstrand, we embarked, and returned to Kiulthal, from whence we continued our journey through a country so exceedingly rocky and barren, that if I had not observed occasional slips of corn and pasture in the small vallies, I should have concluded, that the sea had only left it yesterday. As I advanced towards Uddevalla the lands became gradually more and more fertile, yielding rye, barley, and oats, sprinkled with forests of fir, and watered by several lakes. As

* Milton.

we passed these pieces of water in the dusk of the evening, we observed several boats hanging out lights in order to allure the fish into nets.

CHAP.
IV.

Uddevalla is prettily situated on a bay of the sea, and at the bottom of some steep rocks at the extremity of a small but fruitful valley. The houses are built of wood painted red and yellow; the streets are spacious and airy. It contains about 3,000 inhabitants, and carries on a tolerable commerce, exporting iron, planks, and herrings.

As we proceeded in our journey northward from Uddevalla, the hills increased in height; the vallies became more confined, and less fruitful; the rocks more rugged; and the few pines that relieved the eye less tall and luxuriant.

C H A P. V.

*General Remarks on Norway—History—Geography—Benefits of the
Norway Law—Peasants—Climate.*

BOOK.
X.

ABOUT a day's journey from Uddevalla we arrived at the frontiers of Norway. But before I proceed in my journal, I shall, in this chapter, throw together a few general observations on the history, geography, climate, and productions of Norway, a country, though extremely interesting, yet seldom visited by travellers.

Norway was formerly an independent kingdom, governed by its own hereditary sovereigns. On the demise of Hagen the Fifth, in 1319, without male issue, his grandson in the female line, Magnus Smek, united in his person the kingdoms of Sweden and Norway. Magnus was succeeded in the kingdom of Norway by his son Hagen the Sixth, husband of the celebrated Margaret; and at his decease, in 1380, Norway was united to Denmark by their son Olof the Fifth; who dying without issue, Margaret herself was raised to the throne by the unanimous suffrages of the nation. On her death it descended, with Denmark and Sweden, to her nephew Eric of Pomerania.

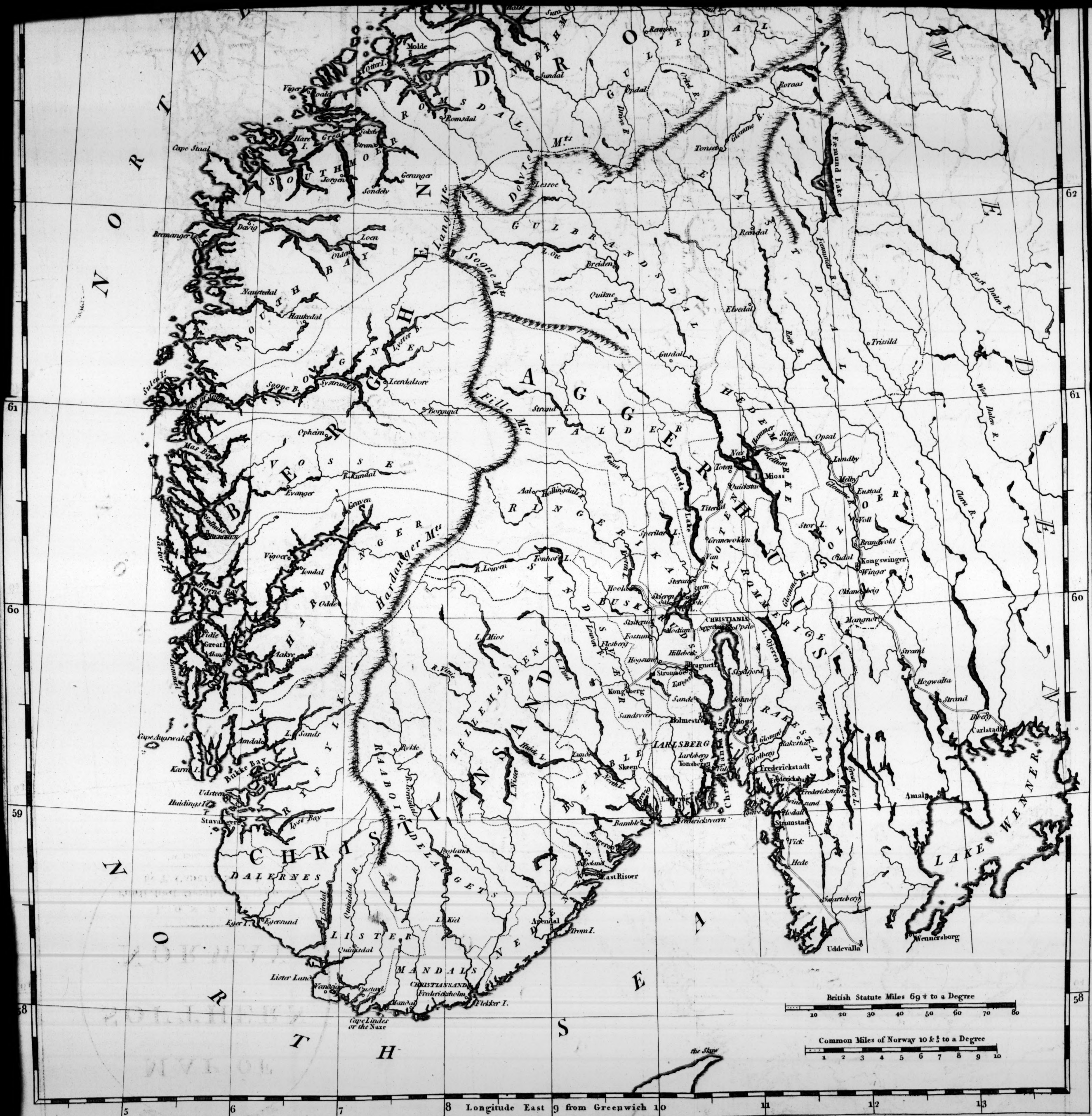
Sweden was afterwards separated from Denmark by the valour
and

MAP OF
SOUTHERN
NORWAY.

LONDON:
Published October 1st 1790.
by T. CADELL, Strand.

W. Palmer sculp.





British Statute Miles 69 $\frac{1}{2}$ to a Degree

10 20 30 40 50 60 70 80

Common Miles of Norway 10 $\frac{1}{2}$ to a Degree

1 2 3 4 5 6 7 8 9 10

Longitude East 9 from Greenwich 10

and address of Gustavus Vasa; but Norway has continued inviolably united to the crown of Denmark.

CHAP.

V.

Norway is formed by nature into two great divisions, Northern, and Southern or Proper Norway, separated from each other by the small Swedish province of Herndahl.

Northern Norway is a long and narrow slip of land, extending as far as North Cape, beyond the seventy-first degree of north latitude, the most northern point of Europe, and bounded to the west and south by the northern ocean, and by Swedish and Russian Lapland. It is divided into Nordland and Finnmark, and comprehended in the government of Drontheim.

Southern, or Norway Proper, of which a map is prefixed to this chapter, is bounded to the north and east by Sweden, and to the west and south by the northern ocean. It is divided into four governments, Aggerhuus or Christiania, Christianland, Berghen, and Drontheim.

Although Norway comprehends a large tract of territory, yet from its rocky soil and northern position its population is by no means adequate to its extent. Perhaps the following tables, giving the number of births and deaths during seven years, may assist us in forming a probable statement of the population of Norway.

		Births.		Deaths.
1777	—	23,331	—	15,655
1778	—	23,487	—	15,222
1779	—	23,862	—	20,768
		S 2		1780

BOOK
X.

		Births.		Deaths.
1780	—	24,711	—	18,523
1781	—	24,153	—	16,072
1782	—	23,944	—	17,503
1783	—	21,554	—	19,357
		—————		—————
Sum total		165,042		123,100
		—————		—————

By dividing 165,042, the sum total of births during the seven years, by seven, we have 23,577 for the annual average number of births; and by dividing 123,100, the sum total of deaths, by the same number, we have 17,585 for the annual average number of deaths. If, upon a supposition that in the whole kingdom one in 35 dies annually, we multiply 17,585, the annual number of deaths, by 35, we have 605,475 for the population of Norway. Or, if we multiply 23,577, the annual number of births, by 30, the usual mode * of calculation, we have 707,310; and by allowing for omissions, we cannot estimate the probable population of all Norway at more than 750,000 souls.

The Norwegians, being the same race with the Danes, and so long connected with them in religion and government, speak the same language, with a necessary mixture of provincial expressions. Wilse †, a native of Norway, informs us, that the gentry and inhabitants of the principal towns, allow-

* See Dr. Price on Annuities.

† Wilse's Reise, p. 28.

ing for a few provincial expressions, speak purer Danish than is usual even in Denmark, not excepting Copenhagen; that the inhabitants of the eastern confines bordering on Sweden naturally blend many Swedish words; that throughout the whole country the general accent and cadence is more analogous to the Swedish * than to the Danish pronunciation; and that the inhabitants on the western coasts, who have a more constant communication with the Danes, partake less of this peculiarity.

The Norwegians maintain their own army, which consists of 24,000 infantry, and 6,000 cavalry. The troops are much esteemed for their bravery, and, like the Swiss mountaineers, exceedingly attached to their country.

The horses which supply their cavalry are small, but strong, active, and hardy.

Every peasant (those excepted who inhabit the coasts, and are classed as sailors) not born in a town, or upon some noble estate, is by birth a soldier, and enrolled for service at the age of sixteen. From that year until he has attained the age of 26, he is classed in the young militia. At 26 he enters into the old militia, and continues to serve till 36, at which period he receives his discharge. The militia take the field every year in the month of June, and remain encamped about a month.

Norway is blessed with a particular code, called the *Norway*

* The Swedish and Danish languages ing or chanting tone. The Swedes are both dialects of the Teutonic or have a more varied and lively pronunciation. German, and are both spoken in a sing-

BOOK
X.

Law, compiled by Grieffefeld, at the command of Christian the Fifth, the great legislator of his country. By this law, the palladium of Norway, the peasants are free, a few only excepted on certain noble estates near Frederickstadt. But the virtue of this law extends itself even to those serfs, for no proprietor can have more than one of these privileged estates; and unless he possesses a title or certain rank, and resides on his estate, he loses his privilege, and the peasants are free.

The benefits of the Norway Code are so visible in its general effects on the happiness and in the appearance of the peasants, that a traveller must be blind who does not instantly perceive the difference between the free peasants of Norway and the enslaved vassals of Denmark, though both living under the same government.

Many of the peasants pretend to be descended from the ancient nobles, and some even from the royal line: they greatly pride themselves upon this supposed descent, and are careful not to give their children in marriage but to their equals in birth and blood.

A curious custom prevails in Norway, called *odels right*, or right of inheritance, by which the proprietor of certain freehold estates may re-purchase his estate, which either he or any of his ancestors have sold, provided he can prove the title of his family. But in order to enforce this claim, his ancestors, or he, must have declared every tenth year, at the sessions, that they lay claim to the estate, but that they want money to redeem it; and if he,
or

or his heirs are able to obtain a sufficient sum, then the possessor must, on receiving the money, give up the estate to the *odels-man*. For this reason, the peasants who are freeholders keep a strict account of their pedigree. This custom is attended with advantages and disadvantages. As to the advantages, it fixes the affections of the peasant on his native place, and he improves with pleasure those possessions which are so strongly secured to him: it increases the consequence and excites the industry of his family. On the contrary, the estate loses its value when sold to another person, because, as he possesses only a precarious estate, which he may be obliged to resign, he is not inclined to improve the lands, as if they were irrecoverably his own.

The Norwegian peasants possess much spirit and fire in their manner, are frank, open, and undaunted, yet not insolent; never fawning to their superiors, yet paying proper respect to those above them.

Their principal mode of salute is by offering their hand; and when we gave them or paid them a trifle, the peasants, instead of returning thanks by words or by a bow, shook our hands with great frankness and cordiality.

The peasants of Norway are well clothed and well lodged, and appear to possess more comforts and conveniences of life than any which I have seen in the course of my travels, excepting in some parts of Switzerland.

They weave their ordinary cloth and linen; they make also a kind of stuff like a Scotch plaid. The cloth which the men use

BOOK
X.

for their coats is principally of a stone colour, with red button-holes, and white metal buttons.

The women, while employed in their household affairs, frequently, as in Sweden, appear only with a petticoat and a shift, with a collar reaching to the throat, and a black sash tied round the waist. Their linen is remarkably fine; and as they are usually well made, this mode of dress sets off their shapes to the highest advantage.

The common food of the peasant is milk, cheese, dried or salted fish, and sometimes, but rarely, flesh or dried meat, oat-bread called *flad-brod*, baked in small cakes about the size and thickness of a pancake; it is usually made twice a year. I observed a woman employed in preparing it: having placed over the fire a round iron plate, she took a handful of dough, and rolled it out with a rolling-pin to the size of the iron plate; she then placed it on the plate, and baked it on one side, then turned it on the other with a small stick. In this manner she baked an astonishing number in less than a quarter of an hour; and I was informed that one woman, in one day, can bake sufficient for the family during a whole year. The peasants also, in times of scarcity, mix the bark of trees, usually of the fir-tree, with their oatmeal; then dry this bark before the fire, grind it to powder, mix it with some oatmeal, then bake it, and eat it like bread: it is bitterish, and affords but little nourishment.

As a luxury, the peasants eat *sharke*, or thin slices of meat,
8 sprinkled

sprinkled with salt, and dried in the wind, like hung beef; also a soup made like a hasty-pudding, of oatmeal or barley-meal, and in order to render it more palatable, they put in it a pickled herring or salted mackerel.

CHAP.

V.

The use of potatoes has been lately introduced, but those roots do not grow to any size in a country where the summer is so short.

Fabricius strongly recommends, in times of scarcity, the mosses and lichens, and particularly the *lichen islandicus*, which yields a very nourishing sustenance, and is commonly used for food in Iceland.

According to a series of meteorological observations taken by Mr. Wilse, pastor of Sydeborg, it snows most in December and in the middle of January. It rains most in April, October, and August. The clearest weather is from the middle of June to the middle of July, and during the whole month of March. Winds are most violent in the middle and latter end of April, May, and October. The stillest season is in January; from the tenth of June to the eleventh of July, and in the middle of August, a circumstance very profitable to the oat harvest, which of all corn is more easily subject to cast its ripe grain in windy weather. If we compare the climate of Norway with the climate of London, March at London is like April and the beginning of May in Norway; and the March of Norway is our January. On account of the frequent spring frosts seeds ought not to be sown in gardens before the twentieth of May; and the frosts of the latter end of August are no less detrimental.

BOOK

X.

The heat and cold varies so much in Norway, that in June or July, the mercury in Fahrenheit's thermometer, as observed by Mr. Wilse at Sydeborg, near Frederickshall, not unusually rises to 88, and on the first of January 1782, fell to—22, or 54 degrees below the freezing point. At Eger, according to professor Stroem's observations, it fell on that same day to—36 $\frac{1}{2}$; and at Kongsberg to—40, or 72 below freezing point, a degree of cold by which quicksilver is congeled. This extreme rise and fall of the quicksilver makes a difference of 110 degrees between the greatest heat and greatest cold at the same place; a difference much more considerable than is observed at Upsala or Stockholm, which lie nearly in the same latitude as Sydeborg.

In some places vegetation is so quick, that the corn is sown and cut in six or seven weeks.

Tillage cannot generally be very flourishing in a country, which is in many parts so rocky as to defy the plough; where the climate is so severe that the hoar-frosts begin in September, and where the cold in the highlands prevents the maturity of the corn. It is true, indeed, that the small vallies, and the intervals between the rocks, are usually provided with a fruitful soil, and that the industry of the peasants covers the naked rocks and the sandy grounds with a new earth; yet the arable grounds are few, and no parts of Norway yield sufficient corn for interior consumption, the districts of Hedemark, Toten, and Ringerike, excepted.

This deficiency is occasioned by the nature of the climate and soil. In spring, and in the first summer months, the drought

drought and heat are frequently so intolerable, and the vegetable mould so thin, that the roots of the corn and grafs are burned up, if a few days of sunshine succeed each other without rain. Also the greatest part of the soil is so much blended with sand, that too much rain cannot fall in spring and summer. In autumn, on the contrary, the decreased warmth, and the great quantity of rain prevents the corn from ripening, and it is frequently cut green. Not unufually, when a favourable season has ripened the corn, the frequent and violent autumnal rains hinder the carrying of it in until it is almost spoiled. Also the small quantity of arable land feldom lies fallow, but is sowed every year, and therefore requires more manure than can be ufually procured.

All these circumstances so much counteract the industry of the Norwegian farmers, that even in the most favourable seasons a considerable importation of corn is annually necessary; and in unfavourable harvests the utmost dearth is experienced in all the inland parts, as the transport of the corn from the sea coasts is highly expensive.

In order to dry the corn exposed to the heavy rains, the peasants fix forked poles, about ten feet high, place rows of other poles transversely, on which they file the sheaves, the lowermost row hanging about two feet from the ground. They are also frequently obliged to bake the corn in wooden sheds, heated by means of stoves.

As Norway, therefore, does not produce sufficient corn for its

BOOK
X.

own consumption, Denmark enjoys the exclusive privilege of supplying with grain that part called Sudenfields, comprehending the two governments of Aggerhuus and Christianfand. This monopoly frequently occasions a scarcity of corn; but though sometimes attended with great inconveniences and occasional distress, yet will not be abolished without great difficulty, because the Danish nobles, who are always at the head of affairs, find their interest in its continuance.

But Norway, however deficient in arable land, is exceedingly rich in pasture, and consequently produces much cattle. The mode of keeping the cows is similar to that practised in the mountains of Switzerland. About the middle of May they are driven to the meadows; towards the middle of June are sent to pasture on the heights, or in the midst of the forests, where they continue till autumn. The cows are usually tended by a woman, who inhabits a small hut, milks them twice a day, and makes butter and cheese on the spot. On their return the cattle are pastured in the meadows, until the snow sets in about the middle of October, when they are removed to the stables, and fed during winter with four-fifths of straw, and one-fifth of hay. The horses are usually foddered with hay during winter, and are seldom pastured before the beginning of June. In some places the cattle are fed also with salted fish.

Agriculture has been of late years greatly improved in these parts, and the landed estates are increased within these last fifty years near one-third in their value. This improvement is considerably

considerably owing to the labours and encouragement of the patriotic society, which gives premiums for the best improvements and instructions in every part of farming.

CHAP.

V.

The fisheries, particularly on the western coast, furnish employment and wealth to the natives, and are the means of supplying the finest sailors for manning the Danish fleet in times of war.

The principal fish, which, dried and salted, furnish so considerable an article of exportation, are the cod, the ling, and the whiting: their livers, besides, yield train oil, and the smallest are given as winter fodder to the cattle.

The herring fishery is not so profitable as formerly, as these fish, which used to frequent the coasts of Norway, in their progress from the North Pole, now keep at a greater distance from these shores, and first approach the rocks of Marstrand and Stroemstrand, which has transferred to the Swedes the principal herring fishery in these parts, though still sufficient profit accrues to those enterprising fishermen who venture further from the coasts..

The salmon are taken partly in the bays, and partly in the rivers, the streams of which they ascend for the purpose of spawning in spring. This is the most costly fish in these parts, and is cured by salting and smoking.

Mackerel might also be taken in much larger quantities, if many of the Norwegians were not prejudiced against eating them, from a strange notion, that shoals of mackerel often attack and devour the human species, when bathing in the sea.

The

BOOK
X.

The extensive forests of Norway, which furnish such riches to the proprietors, and so much employment to the natives, are applied to the following purposes :

1. For spars, beams, and planks, which are exported in such large quantities. 2. For charcoal, which is required for the smelting of the ores, for the glass furnaces, and other manufactures. The wood used for this purpose is usually of an inferior sort, and chiefly in the inner parts, where the transport of the planks is too expensive. 3. For building, the greatest part of the houses in Norway being constructed of wood ; for although there is plenty of stone, yet the transporting of the materials, and the lime, are too expensive for common use. 4. For the roads, which, in the more northern parts, are almost entirely formed with wood. 5. For turpentine, for which the oldest trees are mostly used. 6. For fencing and enclosing the fields, quickset hedges being almost unknown. The woods used for enclosures is chiefly pine or fir, and must be renewed every three or four years. 7. For fuel. 8. For manure, by the same process of burning the trees and manuring the soil with the ashes, which is practised in Sweden, and is so destructive to the forests.

Besides these general uses derived from the forests, the particular trees are beneficially employed to the following purposes.

The bark of the pine or fir, and also of the elm, which is not common in Norway, is dried, ground, and mixed among meal, and is boiled up with other food to feed swine, who thrive much upon it.

The birch, which flourishes in these northern regions, is particularly useful for various purposes. It is more generally used for fuel than any other wood. The outer bark, or the white rind, on account of its firmness and sap, easily escapes putrefaction even in the dampest places, and for this reason is employed for covering the roofs of the houses, in order to keep out the rain.

This mode of roofing occasions such a large consumption of the outward bark, that the birch which are felled would not supply a sufficient quantity; it is, therefore, not unusual to strip off the outward bark while the tree is standing, and if peeled with care, it always grows again.

The inner bark of the birch is applied like the bark of oaks for tanning hides, fishing nets, and sails, which it renders more durable.

This tree also supplies a kind of wine by the following process: a hole is bored in the trunk, and the wine distils into a flask placed under it. The tree suffers little damage, if the hole is immediately closed by a wooden peg. The twigs of the birch, as well as the elder and aspen, are given to horses in scarcity of fodder. A decoction of oak leaves in beer is used by the peasants as a cure for the rheumatism, by applying a cloth dipped in the decoction to the part affected.

The general exports of Norway are tallow, butter, salt, dried fish, timber and planks, horses and horned cattle, silver, allum, Prussian blue, copper, of which the celebrated mine of Roras yields

BOOK
X.

yielded annually to the value of £. 67,500; and iron, of which the most productive mine is near Arendal.

Norway abounds in lakes and rivers, more than any country I ever visited excepting Switzerland. It is remarkable for the number and beauty of the bays fringed with wood. Many of the lakes are so large, that they appear like inlets of the sea; and the bays are so small, that they appear like lakes: but I am anticipating my journal.

CHAP.

C H A P. VI.

*Fredericshall—Fortress of Fredericsstein—Observations on the Death
of Charles the Twelfth—Tistedal—Fredericsstadt—Christiania.*

SEPTEMBER 4. Norway is separated from Sweden by the bay of Swinefund, a bay or inlet of the sea, which in this part forms a strait between the perpendicular rocks, so narrow as to bear the appearance of a river, yet so deep as to admit ships of the greatest burden. On the Swedish side of the bay our passports were examined by a Swedish custom-house officer; and on our being ferried over the other shore, our baggage was slightly inspected by a Danish custom-house officer, who dwells in a comfortable house overhanging the edge of the water.

CHAP.
VI.

In a few miles we reached Fredericshall, the frontier town of Norway, standing on the extremity of the Swinefund, at the mouth of the river Tiste. The principal commerce of the town consists in the exportation of planks, the greatest part of which are sent to England. The wood is floated down the various cataracts, and river Tiste, sometimes above 100 English miles, from the interior parts of the country, and sawed here: for this purpose thirty-six saw-mills are erected on the banks of the river Tiste, which forms a series of cataracts.

VOL. III.

U

The

BOOK
X.

The harbour is very safe and commodious; but the large quantity of saw-dust brought down the river from the different saw-mills choaks it up in many parts, and occasions an annual expence for clearing it away.

The port possesses a few particular immunities. Goods imported for exportation pay no duty, unless touched for home consumption, and then are charged with the usual imposts.

The town contains about 3,000 inhabitants; the streets are airy; the houses are built of wood painted red, and a few white.

On the summit of an almost perpendicular rock, which overhangs the town, stands the strong and hitherto impregnable fortrefs of Fredericsstein, much celebrated in the history of the north; as in besieging it Charles the Twelfth received his death. I did not omit visiting the spot rendered memorable by the death of the northern lion, as he is sometimes emphatically stiled. This spot, which was once marked by a pillar erected by the king of Denmark, but pulled down at the request of the king of Sweden, is at the extremity of the present governor's garden, at the bottom of the steep rock, on which stands the fort of Gullenlowe. It was to me particularly interesting, for it convinced me that a small ball might have reached Charles, as the distance from the nearest bastion could not be more than between five and six hundred yards. Nor could I avoid remarking, that Motraye's plan of Fredericstein and the adjacent batteries is in many parts extremely deficient; and from the best information

information that I have collected, that both his and Voltaire's account of the king's death, and particularly of the wound which occasioned it, are very inaccurate.

CHAP.
VI.

But in order to obtain farther and more complete information concerning the probable cause of the king's death, I called upon Benk Enkelfon of Tistedal, an old Norwegian, now in the ninety-sixth year of his age, and who was in his twenty-eighth year when he served as a gunner of the Danish garrison when Fredericsstein was besieged by Charles the Twelfth. By means of a gentleman of Fredericshall, who politely accompanied me to this old man's house, and obligingly condescended to be my interpreter, I procured the following intelligence; which I shall give to the reader in question and answer in the same manner in which I obtained it.

Do you think, that the king was shot from the ramparts, or assassinated by any of his own troops? *From the ramparts undoubtedly.*—What kind of shot was fired against the Swedish trenches? *All sorts, and particularly small shot in cartouches from cannon.*—Could the king, in the place where he was, be reached by a small shot? *Yes; very easily; as a small shot could take effect at twice the distance.*—Were many soldiers killed near him? *Very many; they fell about him like straw in such numbers that they were buried on the spot. The place was also so much exposed to the fire from the ramparts, that the Swedes could not venture to work at the trenches by day, but only in the night.*—From what fortrefs do you think Charles received his death; from Oberberg, or

U 2

from

BOOK
X.

from the citadel? *Certainly from the batteries of the citadel, which bore upon the place, and not from Oberberg, from which it was defended by an intervening hill. I then served in the fortrefs of Oberberg; and we did not that night fire a single shot from thence*.*

From this circumstantial evidence given by a person who had served in the garrison of Fredericsstein at the time when it was besieged, and who had no prejudices or interest to bias or mislead him, joined to my own observations upon the spot, we may rest assured, that Charles might have been easily reached by a small † ball from the ramparts of the citadel; and therefore that the

* This shews the falsity of Motraye's account, which says, that the king was shot from the fortrefs of Oberberg.

† An unquestionable proof that the wound was made by a small ball is derived from the evidence of the following persons of the highest rank and credibility. "On the 12th of July, 1746, between five and six in the morning, the following persons entered the vault in which is interred the body of Charles the Twelfth, and examined the wound in his head. On the right side below the temple was a plaister so strongly fixed as not to be removed without great difficulty; under which they noticed an orifice which seemed to descend to the back part of the head, seven lines long and two broad. On the left side was a plaister of the same size. All the temple was driven out, and the bones shattered in such a

manner, as made it easy to distinguish that the ball went out on that side. The face was a little disfigured, the mouth a little open, and some teeth visible.

Signed, C. Harteman, Ch. Ekelblad, and John von Hoepken.

Mr. Firman, an engraver of medals at Stockholm, possesses a mask of plaister of Paris, moulded from the face of Charles the Twelfth, when the king's body lay at the palace of Carlsberg previous to the interment. The inspection of this curious mask, besides representing the exact features of that monarch, led me to make some remarks on the size and situation of the wound which occasioned his death, and which has given rise to such contradictory accounts and conjectures. The mask reaches no farther than the extremity of each temple. The mark of the wound on the right temple

the confident assertions of those persons who pretend, that he could not be touched by a musket-ball, were totally groundless.

CHAP.
VI.

In opposition also to the opinion of the late queen-dowager we may remark, that her majesty was much prejudiced against Frederic king of Sweden, and inclined to adopt and circulate any report to his discredit. Influenced probably by his mother's prejudices, the present king was at one time so convinced, that Cronstedt had assassinated Charles, as to refuse giving a commission to his grandson, declaring, that he never would confer a military rank on the grandson of a person who had assassinated the king of Sweden; but two years afterwards he voluntarily gave the commission to the same person, candidly alledging, that he had been mistaken, and that he was now convinced Cronstedt had no share in the king's assassination.

The question, therefore, in regard to the death of Charles, is now reduced to a very short compass; and all the vague anecdotes and uncertain conjectures, which, without any foundation *,

temple is very visible, and is not large. The bones were apparently much shattered, but the eyes were perfect in their sockets; sufficiently proving, that they were not dislodged, as Motraye and Voltaire assert.

* In my second visit to Stockholm, I found, on more accurate enquiry, that many of the anecdotes which are related

in Book VII. Chap. iii. on the death of Charles the Twelfth, as tending to confirm the report of his assassination, were either very uncertain, mistated, or exaggerated; and particularly that the account concerning Cronstedt's confession and Frederic's remorse was totally void of foundation.

attributes

BOOK
X.

attributes his death to assassination, can weigh nothing against positive fact.

Elkenfon described Charles as tall and thin; his hair short, thick, and curling, with great animation of countenance. He shewed us a wooden chair, in which Charles was sitting when he was shot. The old man recollected to have seen the king three times, once in particular in the town of Fredericshall. As he was sitting at the window of a house inhabited by one of the magistrates, he observed Charles in the opposite house. While the batteries from the citadel were firing heavily at the enemy's trenches, a young woman, who was looking at the king from one of the windows of the magistrate's house, chanced to drop a ring into the street. His majesty taking notice of her, said, "Madam, do the guns of this place always make such an uproar?" "Never," returned the girl, "but when we are honoured with such illustrious visitors as your majesty." The king was much pleased with the answer, and ordered one of his soldiers to take up the ring and return it.

The small village of Tistedal is situated at about three miles from Fredericshall, upon a beautiful cataract of the Tifte, which precipitates itself in continued but irregular falls for a considerable way, and turns several saw-mills that form very picturesque objects, impending over the torrent of waters. Above the village is a villa called Vake, from which we commanded a most delightful prospect. Towards the inland parts, a small lake beautifully fringed with pasture and wood; below, the river
Tifte

Tiste forming a series of cataracts, then winding through a small valley and between two ridges of rocks shaded with pines and underwood; the bay of the sea sprinkled with rocky islands; the town of Fredericshall and its castle towering on the summit of a perpendicular rock closing the view.

Fredericsstadt, distant from Fredericshall about four Norwegian, or nearly twenty-six English miles, stands upon the river Glomme, and is the most regular fortress in this part of Norway, containing an arsenal amply supplied with arms for the militia in case of a rupture with Sweden. It was built in 1567, by Frederic the Second, strengthened by Frederic the Third, and has been since gradually enlarged and fortified according to the modern and more regular plan. The ramparts enclose a space of about three quarters of a mile in circumference, and the population of the town, including the two suburbs, amounts to no more than 800 souls. A few years ago the town was consumed by fire, and the houses are mostly new. Close to the town is the new fortress of Kongsteen, on a rocky eminence, capable of containing a garrison of 300 men. Several convicts are here condemned to hard labour. The greatest offenders have an iron cap, chains round their arms, legs, and bodies: the chains round their arms are rivetted to a wheelbarrow, which is never loosened.

The town is situated upon the Glomme, the largest river in this part of Norway. The inhabitants export planks, and a few small masts. The principal commerce is carried on by Messrs. Ankers and Holt, of Christiania.

This

BOOK
X.

This river Glomme is not navigable in any part of its course from the lake Mioss to Fredericsstadt, its stream being interrupted by such frequent cataracts and shoals as in some places render it necessary to drag the trees, which are floated down, over the ground. At least 50,000 trees are annually floated to Fredericsstadt.

September 6. We ferried over the Glomme at the gates of the town, and continued our journey, anxious to reach Christiania. The country is in general extremely fertile and agreeable, it rises in gentle hills, and though rocky in many parts, is covered with a rich soil, producing abundance of corn, and clothed with forests of firs and pines, intermixed with oak, beech, poplar, and mountain ash. The face of the country is prettily sprinkled with numerous lakes and rivulets, and thickly dotted with cottages, rudely though not unpleasantly situated on rocky eminences in the midst of the luxuriant forest. These cottages are mostly covered with red tiles, and appeared larger and more commodious than those we had just quitted in Sweden. They were so much scattered over the hills, that we seldom observed a cluster of more than four or five in one spot; and the churches standing almost singly, their spires rising above the surrounding trees, were picturesque objects.

We stopped a short time at Mofs, in order to examine the iron works belonging to Mr. Bernard Anker, of Christiania. The situation of Mofs is exceedingly romantic. It is divided by a lively torrent, which dashes over the crags, and turns several saw mills,

mills, and stands on the shore of a beautiful bay or inlet, the rising banks adorned with fine hanging woods, a few gentlemen's seats, and numerous farm houses. The iron works which principally support the place were first established in 1705; for some time the proprietors only manufactured bar iron, grates, and stoves, and a variety of iron utensils; but lately they have cast cannon, which are mostly exported to Copenhagen. The works employ about 150 men.

We passed the night at Skydjord, a small village in a most delightful situation, where we found an inn with very comfortable accommodations, and two very neat bed-chambers.

As we approached Christiania, the country was more wild and hilly, but still very fertile and agreeable; and about two miles from the town we came to the top of a mountain, and burst upon as fine a view as I ever beheld. From the point on which we stood in raptures, the grounds, laid out in rich enclosures, gradually sloped to the sea; below us appeared Christiania, situated at the extremity of an extensive and fertile valley, forming a semi-circular bend along the shore of a most beautiful bay, which being enclosed by hills, uplands, and forests, had the appearance of a large lake. Behind, before, and around, the inland mountains of Norway rose on mountains covered with dark forests of pines and fir, the inexhaustible riches of the north. The most distant summits were capped with eternal snow. From the glow of the atmosphere, the warmth of the weather, the variety of the productions, and the mild beauties of the adjacent scenery, I could

scarcely believe, that I was nearly in the 60th degree of northern latitude.

We at length forced ourselves from this enchanting spot, enjoying, as we gradually descended, the scenes before us, and arrived about mid-day at Christiania.

Christiania is distant about 30 English miles from the open sea. The navigation of the bay is somewhat difficult, but sufficiently deep for the largest vessels, having six or seven fathom depth of water close to the quay.

Christiania is esteemed the capital of Norway, because it contains the supreme court of justice. It lies in latitude $59^{\circ} 6' 37''$, and stands in a semicircular form on the northern extremity of the bay of Biorning, an inlet of the sea, forming the northern extremity of the gulf of Christiania, whose rocky shores are overspread with thick forests.

Christiania is divided into, 1. The city, and the three suburbs of Waterlandt, Peterwigen, and Fierdingen. 2. The fortrefs of Aggerhuus; and 3. The old town of Opsloe or Ansloe. The city contains 418 houses, the suburbs 682, Opsloe 400; and the number of inhabitants amount to about 9,000. The city, which formerly occupied the site of Opsloe, was rebuilt in its present situation by Christian the Fourth, after a plan designed by himself. The streets are carried in a strait line, and at right angles, to each other, are uniformly forty feet broad, and are very neat and clean.

Here is a Latin school, endowed by Christian the Fourth in

1635. It is governed by a rector or upper master, a corrector or under master, and three assistants; but contained, in 1784, only thirty-seven scholars. They are divided into six classes, and are instructed in Latin, Greek, and Hebrew.

CHAP.
VI.

A collection of about 6,000 volumes, lately left to the town by Mr. Deichman, a native, will serve to form the beginning of a public library.

The castle of Aggerhuus is built on a rocky eminence on the west side of the bay, at a small distance from the city. It is a very ancient fortress, and was besieged by the Swedes in 1310. An inscription over the door of a brick tower informed me, that it was strengthened in 1633 by Christian the Fourth; and several other dates and inscriptions shewed, that it had received additional fortifications by the succeeding kings of Denmark. This fortress is small but strong. In peace the garrison consists of about 500 troops, but in war is augmented to 1000.

Aggerhuus sustained a siege in 1717 from Charles the Twelfth in person, who occupied the city and suburbs, but was compelled for want of provision to retire. The walls of many houses in Christiania still bear the marks of the balls which were shot from the batteries of the fortress against Charles, as he rode daily through the streets with his usual rashness, and reconnoitred the state of the fortress.

The governor of Aggerhuus is the chief governor of Norway. He presides in the high court of justice, called *Overhoflet*, which judges in the last resort all civil causes above a certain

value. In all causes surpassing that value an appeal lies to the supreme court at Copenhagen.

Opsloe was the site of the old town, which was burnt in 1624, and now contains only about 400 houses, and the episcopal palace. The bishop of Christiania is metropolitan of Norway.

Christiania has a very excellent harbour, and carries on a considerable trade. The principal exports are tar, soap, iron, copper, planks, and deals; allum manufactured at the Cobal works for about £. 3,000; iron from the four works of Borum, Edswold, Narkedahl, and Ondahlen, about £. 14,000; copper from Foldahl, at £. 10,000; planks and deals £. 90,000, principally to England.

The planks and deals are of superior estimation to those sent from America, Russia, and the other parts of the Baltic, because the trees which yield them grow on the rocks, and are therefore firmer, more compact, and less liable to rot than the others, which chiefly shoot from a sandy or loamy soil. The planks are either red or white fir or pine. The red wood is produced from the Scotch fir, and the white wood, which is in such high estimation, from the spruce fir. This wood is the most demanded, because no country produces it in such quantities as this part of Norway. Each tree yields three pieces of timber, eleven or twelve feet in length, and is usually sawed into three planks. A tree generally requires seventy or eighty years growth before it arrives at its greatest perfection.

The environs of Christiania not yielding sufficient planks for exportation, the greatest part of the timber is brought from the
more

more inland parts. The trees are hewn in the forests, and floated down the rivers and cataracts. Saw-mills are used for the purpose of cutting the planks, but must be privileged, and can only cut a certain quantity. The proprietors are bound to declare on oath, that they have not exceeded that quantity; and if they do, the privilege is taken away, and the saw-mill destroyed.

There are 136 privileged saw-mills at Christiania, of which 100 belong to the family of the Ankers. The quantity of planks permitted to be cut, amounts to 20,000,000 standard deals, twelve feet long, and one inch and a quarter thick.

During our stay at Christiania we received great civilities from the Ankers, the richest and most commercial family in Norway. Mr. Bernard Anker, who is Fellow of the Royal Society, speaks English nearly as well as a native, possesses an excellent house in Christiania, elegantly furnished in the English taste, and ornamented with a good collection of pictures, which he purchased in Italy. He lives in a style of elegant magnificence, and receives all travellers with unbounded politeness and hospitality. He has an excellent library, a good apparatus of natural philosophy from England, and a curious collection of the minerals and marbles of Norway.

We also accompanied Mr. Anker to Vickery, a neat villa belonging to his family, about four miles from Christiania. It stands pleasantly on the bay, and commands many picturesque views. The planks are shipped close to the house. From
thence

BOOK
X.
}

thence Mr. Peter Anker drove me in a low phaeton drawn by two active Norwegian ponies to Bockstadt, a country house which he has just built on the banks of a small but beautiful lake, about four miles from Vickery, in the midst of an endless forest, and surrounded by mountains. He shewed us his grounds, which are laid out very pleasantly, and carried us into his kitchen-garden, which produces all kinds of vegetables, excellent cherries, pears, apples, apricots, currants, gooseberries, and in a favourable season tolerable peaches. He pointed out to me a small plantation of all the principal trees which grow spontaneously in Norway. I remarked the plane, the aspen, the ash, mountain ash, oak, elm, beech, birch, alder, willows, and various species of pines and firs, which form the riches of these parts.

Mr. Peter Anker has lately introduced various species of English husbandry into these parts. He has sown crops of clover, which succeed very well, and has lately cultivated turneps.

C H A P. VII.

*Silver Mines of Kongsberg—Cobalt Works of Fossun—Journey
into the interior Parts of Norway.*

SEPTEMBER 10. We quitted Christiania with much regret, after having expressed our acknowledgment to Mr. Bernard Anker for his extreme politeness and hospitality. That gentleman also increased our obligations to him by sketching out a tour through the inland parts of Norway, and by giving us a circular letter, which we found a passport of introduction, and a means of procuring accommodations and information.

CHAP.
VII.

A little beyond Giellebeck, the second post-house from Christiania, we passed, near the high road, a quarry of whitish grey marble, which was first opened in order to supply the stones for the new church at Copenhagen, but is now no longer worked. In the middle of the quarry stands a column of the marble erected in honour of the late king Frederic the Fifth, who visited this spot.

The houses, and even cottages, in the neighbouring villages, are ornamented with staircases from the blocks of this beautiful marble.

From this quarry we ascended through forests of pines and firs to the summit called Paradisberg, or the Mountain of Paradise,

BOOK
X.

dise, so denominated from the fine view it commands, but which, in my opinion, was greatly inferior to that we enjoyed from the eminence overhanging Christiania. The general features of this prospect are views of distant mountains rising above mountains; rich and extensive forests, and below a fertile valley watered by the Dramme; the three towns of Brægnetz, Stromsøe, and Tanger, standing at small distances from each other at the bottom of some rugged rocks, and on the margin of a bay.

These three towns are known by the general name of Dramme, because they are situated on that river. Each has its own church and separate jurisdiction. The inhabitants are very industrious, and carry on a considerable trade. The principal exports are timber and planks; the imports, corn chiefly, and lead from England for the smelting of the silver ore at Kongsberg.

We changed horses at Brægnetz, which lies on the side of the river opposite to that on which Stromsøe and Tanger are situated, and continued our route, coasting the Dramme through a most delightful valley extremely rich in corn and pasture, so thickly peopled, that every fifty yards we observed a cottage, and for several miles together seemed to pass through a continued village. The sloping declivities which bound this vale are so thickly covered with trees, that at some distance they appeared as if they were clad with herbage. The inhabitants of this pleasant district chiefly derive their sustenance from the transport of corn and merchandize to Kongsberg, and in carrying back the silver coined at the mint of that place.

Having

Having ferried over the Dramme at Hogs-fund, we quitted this smiling valley, and passing among hills and rocks, and over stony roads, we did not, till the dusk of the evening, reach Kongsberg, celebrated for its silver mines, whose produce has been considerably exaggerated by most of the travellers that have published on this subject.

Kongsberg stretches on both sides the river Lowe, which, in its course through the town, falls in a series of small but picturesque cataracts over the bare rocks. The crags which border this town are in some parts naked, in others clothed with wood, and intermixed occasionally with slips of corn and pasture; but although there are a few agreeable and fertile spots, yet the leading features of the circumjacent scenery are ruggedness and horror. Kongsberg contains about 1,000 houses, and, including the miners, 6,000 inhabitants. We were accompanied to the mines, which lie about two miles from the town, by a merchant who spoke English, and obligingly served as our interpreter.

These mines were first discovered and worked during the reign of Christian IV. There are six-and-thirty mines now working; the deepest whereof, called Segen-Gottes in der North, is 652 feet perpendicular. The matrix of the ore is the *saxum* of Linnaeus. The silver is extracted according to the usual process, either by smelting the ore with lead, or by pounding.

The pure silver is occasionally found in small grains and in small pieces of different sizes, seldom weighing more than four or five pounds. Sometimes, indeed, but extremely rare, masses

BOOK
X.

of a considerable bulk have been discovered; and one in particular which weighed 409 marks, and was worth 3,000 rix-dollars, or £. 600. This piece is still preserved in the cabinet of curiosities at Copenhagen.

Formerly these mines produced annually 350,000 rix-dollars, or £. 70,000; and, in 1769, even £. 79,000; at present they seldom yield only from £. 50,000 to £. 54,000.

Formerly above 4,000 men were necessary for working the mines, smelting and preparing the ore; but a few years ago 2,400 miners were removed to the cobalt-works lately established at Fossun and to other mines, and the number is now reduced to 2,500.

By these and other reductions, the expence which was before estimated at £. 576 per month, now amounts to only £. 4,400, or about £. 52,800 per annum. Yet even with this diminution the expences generally equal, and sometimes exceed the profits.

Government, therefore, draws no other advantage from these mines, than by giving employment to so many persons, who would be otherwise incapable of gaining their livelihood, and by receiving a certain quantity of specie, which is much wanted in the present exhausted state of the finances in Denmark. For such is the deficiency of specie, that even at Kongsborg itself change for a bank note is with difficulty obtained. The miners are paid in small bank notes, and the whole expences are defrayed in paper currency.

The value of 13,000 rix-dollars, or £. 2,600 in block silver,

is

is annually sent to Copenhagen; the remainder of the ore is coined in the mint of Kongsberg, and transferred to Copenhagen. The largest piece of money now struck at Kongsberg is only eight skillings, or four pence.

CHAP.
VII.

September 11. Having satisfied our curiosity, we departed from Kongsberg in the afternoon, and directed our course to the cobalt-works at Fossun. We returned to Høgsund; but instead of ferrying over the Dramme we coasted that river for a little way, then turned into so rugged a road with such deep ruts, that we very narrowly escaped being overturned; nor did we arrive at the place of our destination till past midnight. We had previously sent forward a peasant to order beds, concluding to find an inn, or at least a peasant's cottage, wherein we might pass the night. To our extreme disappointment, however, we learned that Fossun, which we had taken for a town, contained only two or three villages, consisting of scattered cottages at some distance from each other; and that in the place we stopped at there was only the house of the inspector of the cobalt-works. As it was already extremely dark and cold, and at some distance from any house where we could be accommodated, and more particularly as the roads we just passed had proved so dangerous, we ventured to knock at the inspector's door, and to request admittance for two English travellers who were benighted. The family being in bed, we were for a short time in anxious expectation for the answer; and no knight errant was

BOOK.
X.

ever more agreeably sheltered from darkness, wind, and weather, than we were, on being admitted into the hospitable threshold.

On the next morning a good breakfast was spread for us, and compliments delivered from our host and hostess, with an invitation to pass the day with them, announced their attention and civility. We now found that the name of this particular house was Fossun, and a collection of small adjacent cottages was denominated Modum.

The gentleman, who had so kindly received us at so undue an hour, and without the least previous acquaintance, was Mr. Bornstein, a native of Germany, lately appointed inspector of the cobalt-works. Having paid our respects to our host and his amiable wife, whose politeness we shall ever recollect with gratitude, we strolled about the grounds, and admired the situation of the house, placed near the rivulet Simora, in the midst of a delightful valley, fertile in pasture and corn, hemp, flax, and vegetables, and bordered by high rocks richly clothed with wood.

The inspector himself politely accompanied us to the works: we had an opportunity of observing the whole process, from the first calcination of the ore to its final reduction of the Prussian blue; and were surprised that it goes through 270 hands.

The mine of cobalt was discovered about eight years ago on the summit of a rocky mountain, near Skuterud, a small village

village a few miles from Fossu, where the works are established on account of the numerous waterfalls which are necessary for turning the mills. About a mile from the mine has been lately discovered a vein of the most beautiful quartz; a very fortunate discovery, as quartz is absolutely necessary to mix with the cobalt ore, in order to obtain the blue powder known by the name of the Prussian blue.

The ore being calcined, reduced to powder, and refined, yields the blue powder so much used.

The fabric employs 36 men, and the mines 320. In 1783, 1400 or 1500 weight was obtained, which sold according to its fineness from £.2 10s. to £.12 the 100 weight, and yielded £.10,000. The expences in that year amounted to £.12,000, because the numerous buildings and machines necessary for carrying on the works were still constructing.

When these are finished, the expences will not amount to more than £.4,000; and the inspector assured me, that he should then be able to make double the quantity of Prussian blue than he can at present. Therefore the clear gain to the crown will scarcely fall short of £.16,000 per annum.

The discovery of this mine is a great acquisition to Denmark, as besides giving employment to so many hands, it prevents the importation of Prussian blue.

About six miles from Fossu, we stopped at the small village of Skuterud, and ascended the mountain, on the summit of which are the mines of cobalt. There are two mines, called the north
and

BOOK
X.

and south mine, each with four pits or openings. The deepest is no more than fourteen fathom, because the ore is still in great plenty near the surface. It is found in veins, and is blown up with gunpowder. In our way we passed the fine mine of quartz, which, as I before mentioned, supplies that necessary mineral for the cobalt-works, so necessary, because twelve parts of quartz are mixed with one of cobalt, in order to produce the Prussian blue. This quartz is as white as alabaster, and contains large veins of marien glass, or Russian talk, which in some countries is used for windows instead of glass.

The prospect from the summit of this mountain amply repaid the trouble of ascending it, commanding a hilly country, and at some distance a large plain covered in many parts with rich forests, watered by several streams, and by a large lake, which divides itself into three great branches, called Tyri-fiord, Hole-fiord, and Helsfiord; the banks of which are beautifully covered with fields of corn and pasture, and chequered with wood. Being prevented from long enjoying this delightful view by the dusk of the evening, we descended into the plain, crossed the Snarum upon two rafts made of whole trees lashed together, and came to Oulberg, where we found comfortable accommodations in a peasant's cottage.

The next morning we continued our journey through a most agreeably diversified country, sometimes through a long extent of forests of pine and fir, interspersed with other trees, sometimes crossing the fields along a more open and fertile district to Skerendal,

rendal, a small village in the valley of Skeere, so called from a rivulet of that name, which falls into the lake Tyri.

CHAP.
VII.

The peasant, who served as a postillion, carried us to a very clean and comfortable house, close to a saw-mill, and the maid of the house instantly set before us some coffee, cream, bread, and butter. Having taken refreshment, we demanded of the servant what we had to pay. She answered nothing, and on our expressing surprise, as we took the house for an inn, she added, that her master was owner of the saw-mill; that he was then absent, or would have been proud to have received us; that he always left orders to admit all travellers, and to furnish them with everything they demanded, without accepting the least gratuity; and that if we would stay and dine there, it would be adding to the obligation we had already conferred on them by deigning to accept their scanty fare.

Having expressed our acknowledgments for this rare instance of disinterested hospitality, we embarked in a small boat, and rowed across the lake Tyri, which had made the principal feature in the prospects we have lately enjoyed. This beautiful piece of water I take to be about twenty-five miles in circumference, including its bays and creeks; its shores are gentle eminences richly variegated with the most fertile meadows, corn fields and hanging forests, and backed by lofty mountains towering above each other. Nor have I yet recovered from the astonishment of perceiving such a delightful country in so high a degree of northern latitude. Having
rowed

BOOK
X.

rowed across the lake we landed near Hole, a small village in the district of Ringerike, deservedly esteemed the most fertile part of Norway.

From Hole, we continued our journey through a rich plain, the narrow roads winding between corn fields and inclosures of pasture, and changed horses at Steen, near the picturesque ruins of a church seated on a gentle eminence. This village contains also a few remains of ramparts, which prove it to have been formerly a place of some importance. At a little distance we noticed a mound of earth or barrow, called by the natives the tomb of Halden the Black, king of Norway; and a little further, we passed the church of Norderhug, famous for a battle between the Swedes and Norwegians.

We soon quitted the rich plain, and penetrating into a hilly country, found the roads so exceedingly stony and steep as to require the utmost caution, particularly as the horses in these parts are exceedingly active and lively; notwithstanding all our precautions my carriage was overturned.

At Setran we again changed horses, and while they were getting ready, we made our repast in a peasant's cottage, containing a room with two beds, so clean and neat as would have done credit to a gentleman's house. In the room I observed a print of the unfortunate Struensee in prison, tormented by the devil: those prints were, I presume, circulated and greedily received by the common people at the time of his fall.

From thence we passed through a valley, enriched by a fine
waterfall,

waterfall, detached farm houses, churches, clumps of trees, dispersed among the corn fields and meadows; a river gliding along, and heightening by its transparency and murmurs the charms of this delightful scenery. As we were admiring the beauties of this ever changing scenery evening came on, and I was suddenly struck with a phenomenon, which never occurred to me except in Switzerland, and which I at first mistook for a bright meteor in the heavens. It was a gleam of the setting sun, illuminating the snow capped summits of the distant mountains, and appearing like a flame of fire skirting the distant horizon. The air was clear, the stars shone uncommonly bright, and seemed nearer to the eye than I had ever observed them before, except upon the tops of the Swiss alps.

We took up our abode during the night at Van, a village seated on an eminence, and overlooking the Rands-Sion, a lake near fifty miles long, and scarcely more than two miles broad, embosomed in the mountains, its sloping banks prettily fringed with wood, and chequered with scattered cottages. The next morning we ferried over the lake, and coasted it for about six miles, the road ascending and descending the precipices which overhang the water. We afterwards rowed over several smaller lakes, which supply streams that fall into the Rands-Sion. I observed much pease and some corn still standing, but which the peasants were cutting as fast as possible; several small patches of hops which were very good; many goats were browsing on the

BOOK
X.

sides of the rocks; and several flocks of sheep were pasturing in the vallies, among which a great many were black.

In these parts the price of a milch cow is from seven to nine rix-dollars, £. 1. 8s. to £. 1. 16s. and in winter, when fodder is scarce and dear, one may be purchased for 16s. We met during this day's journey several droves of bullocks and horses driving for sale to Christiania. The bullocks sell from £. 2 to £. 2. 8s. per head; and the horses which are from thirteen to fourteen hands high, and remarkably active and lively, from £. 4 to £. 8 apiece.

We next reached Gran or Granewolden, standing on an eminence rising in the midst of an extensive plain, looking down upon several conical rocks, covered with firs, and remarkable for its two churches in the same church-yard, called the two sisters. These buildings seem of the same date, and at a small distance nearly resemble each other. One is built of stone, the other is whitewashed. In one dedicated to the Virgin divine service is performed only in Lent; in the other, sacred to St. Nicholas, during the remainder of the year. I could not learn by whom, or at what period, these twin churches were built.

The stony roads having shattered the wheels of my cart, we stopped for the purpose of having it repaired at Dahlin, near the northern extremity of the Rands-Sion, backed by a well cultivated and well inhabited mountain.

This part of Norway is greatly infested with wolves and bears.

The latter do the most harm, not only in killing the cattle, but also by destroying the corn. The instances are very rare, which will induce them to attack the human species.

The shepherds are usually followed by large dogs of the Newfoundland species, armed with collars of iron spikes, in order to preserve them against the wolves, who frequently attack them, and endeavour to seize them by the neck. The bears usually fly from them.

The roads of Norway had hitherto appeared to us, long used to the Swedish roads, exceedingly rugged, and scarcely passable with carriages, and both my companion and I had been occasionally overturned; but the road we now passed over mount Kiolway was so execrable, that the others were in comparison superexcellent. I much question indeed if any cart had ever passed before we ventured to traverse it. We ascended about four English miles, and then descended about the same distance, and were obliged to dismount and support our carriages, in order to prevent them from over-setting, which, notwithstanding all our precautions, occasionally happened. During the first part of the way we passed a few cottages; but further on all was wild and uninhabitable, rocks clothed with pines and firs, a dreary but sublime scenery, commanding from the summit a most extensive prospect; to the south of the delightful country we had traversed in our way to Dahlin, the Rands-Sion appearing like a broad river winding among the gloomy rocks; and to the north, hills piled

upon hills, and mountains towering above mountains ; the snowy alps closing the majestic view.

At the bottom of the descent we crossed a lively rivulet called Ana, came to a lake of the same name, and took up our lodgings at the village of Titerud, most delightfully situated on the banks of a small but beautiful lake, forming the calmest and loveliest retreat I ever beheld.

In this sequestered spot, we found, besides the rooms appropriated to the family, two neat bed chambers for ourselves, met with excellent tea and sugar, butter, and cream, and supped upon a fine trout, weighing about six pounds, with which fish the lake abounds.

September 14. At Titerud, we quitted the mountains, and traversed a gently waving country, as fertile and pleasing as the district of Ringerike, well cultivated and well peopled, the roads winding through the fields like garden walks ; changed horses at Quickstand and Lund, and passing through a lawn planted by the hand of nature, and which had the appearance of a park, we reached the banks of the lake Mioss.

This lake extends from north to south, and is 80 English miles in circumference. It is divided by a large peninsula, and is in general from twelve to eighteen in breadth. It contains one island about ten miles in circumference, fertile in corn, pasture, and wood, and sprinkled with several farm houses.

The banks of the lake on the side where we embarked, is
bounded

bounded by abrupt bleak hills, embrowned with thick and dark groves of pine and fir, whose gloomy aspect reminded me, that we were in the 62d degree of northern latitude, and contrasted on the opposite side with banks gently rising from the margin of the water, enriched with fields of corn and pasture, and resembling the fertile districts of a more southern climate; the whole exhibiting a rugged, perspective, and picturesque wildness on one side, and on the other, the cultivated beauties of a milder atmosphere.

We rowed between the island and the peninsula, upon the extremity of which stands Nafs, a small but neat village, and in about two hours landed at Hammer, a gentleman's seat, formerly a large town, containing near 2000 inhabitants.

The site of this once flourishing town can now be only traced by some parts of the old walls, heaps of rubbish, and the picturesque remains of a large cathedral, consisting of four Gothic arches, which stand on an eminence over-looking the lake.

Having satisfied our curiosity, we reembarked, rowed about five miles to a small village, landed and walked to Giellum. Here we procured horses, and continued our journey through a less peopled district thickly strewn with forests, ferried over the Glomme, about as broad as the Thames at Henley. This river receives the Worme which issues from the lake Mioss.

We had frequent views of the Glomme, which presented a broad surface, sometimes watering pleasant vallies, sometimes winding between rocky cliffs, precipitating itself in frequent
cataraets,

cataraacts, and sometimes interrupted by sand banks, over which it frequently shifts its course.

Being now in the 62d degree of north latitude, and in a mountainous country, we had already experienced the approach of winter. On the 14th of September it snowed. On the 15th it was a severe hoar frost, and the surface of several ponds and stagnant waters were frozen the thickness of half a crown. It was, however, clear and sunny, like a fine day in November; but this morning, September 17, it is as cold and severe as with us in the beginning of January. The pines and firs are so thickly covered with hoar frost as to bear the appearance of being sprinkled with snow, and the forest trees have changed their leaves in the space of one night.

This morning having ferried over the Glomme, here as deep and about as broad as the Thames at Putney, we reached Kongswinger, a strong fortress which guards the frontiers of Norway.

Kongswinger contains about fifty small wooden houses, standing near the Glomme, at the foot of the eminence on which towers the Citadel.

The Citadel stands on a steep rock, and is deemed impregnable. Charles the Twelfth reconnoitred it, but found the position so strong, that even he thought it prudent to decline the attempt. It consists of several parts built at different intervals. The most ancient was probably constructed above 400 year ago, and has been gradually enlarged, particularly by Christian the Fifth and Frederic the Fourth.

The

The fortifications which have been lately added render it a regular fortress with eight bastions. In time of war it requires a garrison of 1000 men; its present complement consists only of 120. Some eminences on the other side of the river are higher than that on which the fortress stands, and would be the only means by which the works could be attacked with any prospect of success; but the officer who accompanied us assured us, they were so extremely steep and rugged, that it would be almost impracticable to draw to their summits large pieces of artillery of a size sufficient to batter the walls.

From the windows of the fortress, we commanded a fine view of the Glomme, winding at the foot of a ridge of hills, clothed with trees, and chequered with fields of corn and pasture; the small lake Wingen forming a beautiful feature in the variegated landscape.

C H A P. VIII.

Entrance into Sweden—Carlstadt—Philipstadt—Kioping—Biographical Anecdotes of Scheele.

BOOK.
X.

SEPTEMBER 18. A few miles from Kongswinger, we passed a ridge of hills, which separate the waters that flow into the Glomme, and those that run eastward into the Wenner; changed horses at Magnor, the last village in Norway, soon reached the frontiers, which are marked by a line drawn from north to south, and passed several flat stones, which form the limits of the two kingdoms. On one side I observed the cypher of Adolphus Frederic, 1754, and on the other that of Frederic the Fifth, bearing the same date.

On our entrance into Sweden our passports were examined, and our baggage slightly examined by a custom-house officer. Without this ceremony we should have recognized our arrival in Sweden by the goodness of the roads, which far exceed those of Norway; and indeed are as good, though not so broad, as our turnpikes in England. Such indeed are their goodness throughout the whole country, that during several thousand miles which I travelled in this and my former tour in 1779, I scarcely met with fifty miles that deserved the appellation of indifferent. They are also as pleasant as they are good; and in many

many places look like gravel walks carried through gentlemen's grounds and plantations, as they wind through the fields and extensive forests, the lofty trees casting a gloomy shade with their overhanging foliage.

The two principal objects of our journey from the frontiers of Norway to Stockholm were to examine the canal of Stroemsholm, and to visit the mines of Dalecarlia. Our route lay through the fertile and delightful provinces of Wermeland and Westmanland; at first diversified with mountains, rocks, hills, and dales, clothed with forests of birch, poplar, mountain ash, pine, and fir, and abounding with lakes which succeed each other almost without interruption. Nothing can exceed the beauty of these lakes—they are from four to forty miles in circumference; some so narrow as to appear like broad rivers, others of a circular shape; their shores in some parts steep and rocky, in others gently sloping, but always feathered with hanging wood to the margin of the water; the roads delightfully winding through the dark forests, which overhang the impending precipices, and overshadow the water. Numerous rivulets flow from these lakes, rippling over their stony channels, or forming small cataracts, which glisten through the intervening foliage.

The principal places we passed through were Carlstadt, Philipstadt, and Kioping. At a small distance from Carlstadt we came to the Klara Elb, or large river, a fine clear stream, but with so small a current, as to appear like a narrow lake; we coasted its banks, which are prettily fringed with underwood,

BOOK
X.

until it divides into two streams surrounding the island of Tingwalla, on which Carlstadt is built. These two branches afterwards unite and fall into the lake Wenner.

The island is twelve miles, and the town about a mile and a half in circumference. It was built by Charles the Ninth, and called after his name. The streets are broad and strait. Excepting the cathedral and school, the houses are built of wood and painted. It is a bishop's see; the episcopal palace is likewise of wood, but not painted, and has so extensive a front, and so many windows as to look like a manufactory. The town contains about 1,500 inhabitants, who carry on a commerce of iron and wood across the Wenner, and import in return tea, sugar, and spices.

Philipstadt stands in the midst of a hilly and rocky country, abounding in iron mines, between two small lakes, on a lively rivulet. This town was also built by Charles the Ninth, and called after his son Philip. In 1775 it was utterly destroyed by fire, and has been since rebuilt. It contains no more than sixty houses, which are constructed of wood, and a church and hospital built of stone, plaistered.

We passed through Arboga, and continued our journey north of the river Ulvifon, through a rich and beautiful vale, to Kio-ping, a large straggling dirty town on a small stream, which falls at a little distance into the lake Maeler. The vessels ascend this stream near the extremity of the town, and convey across the Maeler to Stockholm the iron which is produced from the mines of Wermerland.

I did

I did not omit paying a visit to Mr. Scheele, since deceased, who was settled as an apothecary at Kioping, and whose chymical discoveries have rendered his name deservedly celebrated among the naturalists of Europe.

Charles William Scheele, the son of a tradesman, was born at Stralfund, in December, 1742. He received the earliest rudiments of education at a private school, and afterwards in the seminary of that town. Having at a very early age expressed a strong desire to follow the profession of an apothecary, he was bound apprentice to Mr. Bauch, of Gotheborg, with whom he continued till 1765. There he laid the foundation of his chymical knowledge. He was remarkably quiet and serious, extremely attentive to the medical and chymical preparations, and used afterwards to repeat the process in his own apartment. He seems to have been first excited to the study of chymistry, by the perusal of Neuman's chymistry, recommended by Grunberg, an apprentice in the same shop. He also met with Lemerie and Stahl's works, and Kenckell's Laboratory, which seems to have been his favourite book.

In 1765, he departed from Gotheborg, and served different apothecaries; first, Karlstroem, of Malmoe; secondly, Scharenberg, of Stockholm; and, in 1773, obtained an appointment with Loock of Upsala.

At Upsala he increased his knowledge by forming an acquaintance with the learned men of the university, particularly

the strictest friendship with professor Bergman, and by having free access to the public laboratory.

In 1775, he was appointed by the medical college apothecary at Kioping, where he finished his days.

The reader will find, in Wells's *Chemische Annalen* for 1787, a list of the works and principal discoveries of Scheele; also in the *Gentleman's Magazine* for April, 1789.

His character as a chymist is sufficiently known by his great and numerous discoveries in that science.

Scheele had struggled during his whole life against narrow circumstances; and when appointed apothecary of Kioping, he involved himself in debt in order to purchase the stock which had belonged to his predecessor. He had been for some time engaged to marry his predecessor's widow; but waited until he had discharged his debts, and had collected a moderate provision for her in case of his death. He had scarcely effected his purpose, and received the offer of an annuity of £. 300 per annum, if he would settle in England, which would have afforded him more leisure, and a sufficient income to pursue his chymical discoveries, when his health declined. His disorder began with an inflammation in his eyes, arising probably from the intense zeal with which he carried on his chymical experiments, and ended in a total debility, which hurried him to the grave on the twenty-first day of May, 1786, in the fifty-fifth year of his age. Two days before his death, he was married to the person to whom he

he had been so long betrothed, and left her the little money he had been able to save.

CHAP.
VIII.

The union of virtue and knowledge is doubly meritorious; and it is a pleasing satisfaction to add, that the morals of Scheele were strict, and his conduct as irreproachable as his morals in all seasons of life.

Scheele had neither time nor inclination to form common acquaintances; for most of the hours which he could spare from his shop and the duties of his office he employed in his laboratory and library; but he was greatly attached to a few congenial friends, and fond of conversing with them on subjects of chymistry. He was to them extremely open, and of a communicative disposition, never in the least desirous of withholding his information, or concealing his discoveries.

Before he adopted any opinion, he was particularly cautious; but when he had once formed it he was decisive, and defended it with firmness, yet without heat. He was, however, always open to conviction; and more than once retracted his opinion, whenever he was convinced by argument or experiment.

Scheele understood no other languages but the Latin, German, and Swedish; so that he had not the advantage of being benefited by the early intelligence of discoveries made by foreigners, and was forced to wait until the information was conveyed to him in the slow and uncertain channel of translation. Even his acquaintance with the Swedish was not sufficient to write the

BOOK
X.

treatises he sent to the Swedish academy of sciences in that tongue, but he was accustomed to compose them in German, from whence they were translated into Swedish.

When we consider the number and accuracy of Scheele's experiments, we should naturally presume that his chymical apparatus was very complete, and his laboratory large. On the contrary, his laboratory was extremely confined, and his apparatus extremely inconvenient, owing, probably, to the scantiness of his circumstances.

If he made such important and accurate discoveries with a scanty and inconvenient apparatus, and without any assistance, what would he have done, if his circumstances and his situation had been different?

C H A P. IX.

*Palace of Stroemsholm—Canal of Stroemsholm uniting the Province
of Dalecarlia with Stockholm—Incidents of the Journey.*

THE palace of Stroemsholm, which gives its name to the canal now forming between the lakes of Dalecarlia and the Maeler, is prettily situated upon a very small island, encircled by two rapid currents, which fall in a few paces into the Freden lake, that communicates with the Maeler. It was built by Hedwige Eleonora, widow of Charles the Tenth, who lived to be regent during the minority of her grandson Charles the Twelfth; but not being finished during her life time, it was never inhabited until the present king fitted it up in 1774. It is built of brick, stuccoed white, and the front is ornamented at the east end by two projecting square towers, and by a light octagon dome in the middle of the roof. I have scarcely ever seen a more comfortable house; the rooms are lofty and spacious, and the upper story commands a beautiful view of the Freden and the Maeler lakes. It stands in a park beautifully planted by the hand of nature with many fine oaks.

Near the palace are several old wooden buildings, which bear the appearance of carpenters' houses; one of which was inhabited by queen Hedwige, while the palace was preparing for her reception. It is exceedingly curious, remaining in its original state.

CHAP.
IX.

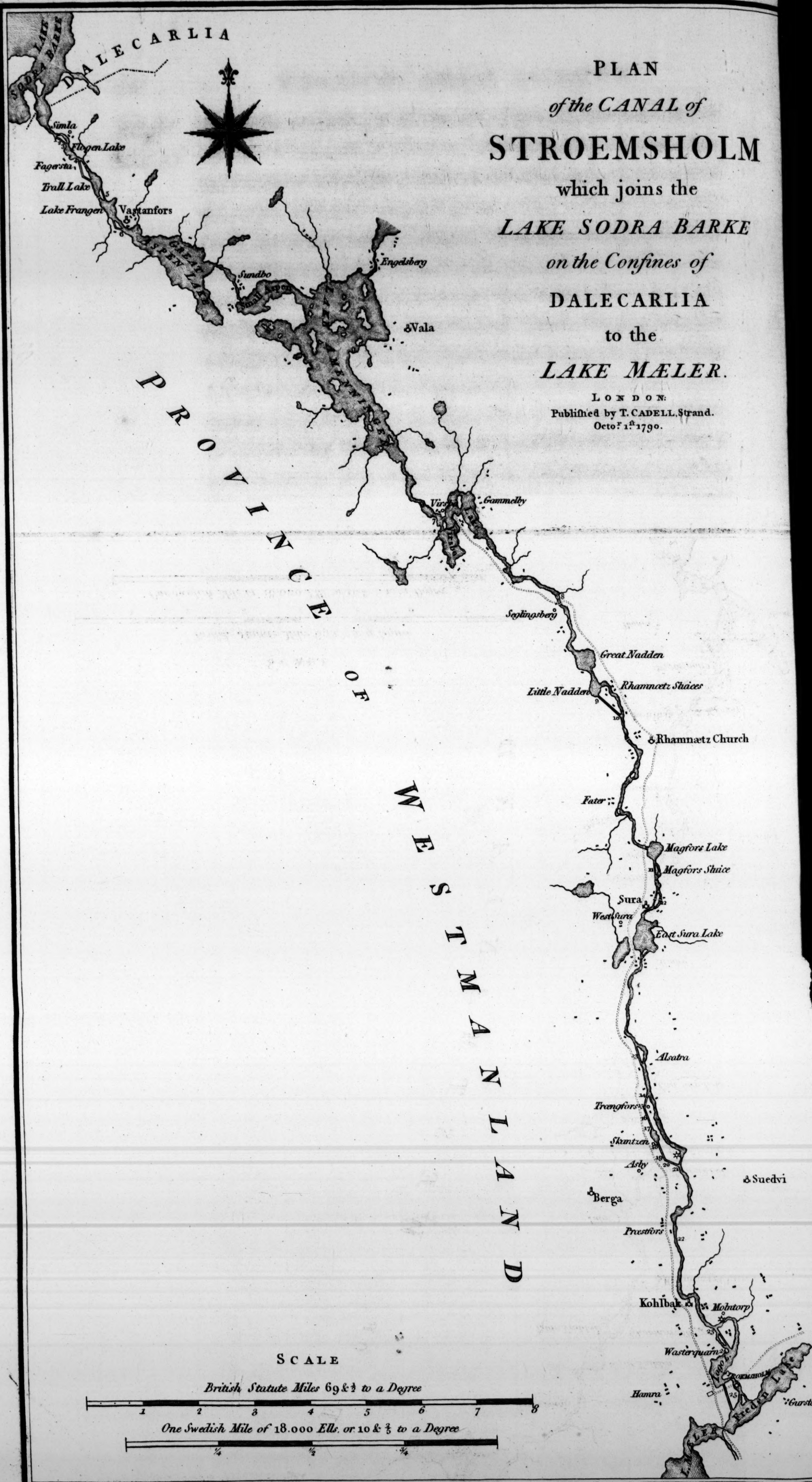
BOOK
X.

state with the furniture of the last century. I noticed several fine portraits; a head of Hedwige herself at a very advanced age; another of Christina, three quarters size, leaning one hand upon a lion's head, well painted, with great expression of countenance; a still finer picture, whole length, of Charles the Twelfth, in the ninth year of his age, leaning also upon a noble lion's head: the painter is the Swedish Ehrenfahl. Charles is here represented as a most beautiful boy: both his physiognomy and appearance are soft and effeminate, and, except in the lustre of his eye, by no means characteristic of his subsequent character.

This palace gives its name to the canal now forming between the lakes on the confines of Dalecarlia and the Maeler, with the following intention.

As the iron and copper from the mines of Westmanland and Dalecarlia, are conveyed by land to the lake Maeler, before they can be forwarded by water to Stockholm; the transport of such heavy goods is of course exceedingly expensive. Accordingly a plan was projected to render the waters navigable from the Sodra Barken, a lake on the confines of Dalecarlia, to the lake Freden, which communicates with the Maeler, or in other words to form an inland navigation from the confines of Dalecarlia to Stockholm.

The waters which join the Sodra Barken and the Freden, consist of numerous lakes and rivers, which, flowing through a rocky country, fall in repeated cataracts, are full of shoals, and
extremely



PLAN
of the CANAL of
STROEMSHOLM
which joins the
LAKE SODRA BARKE
on the Confines of
DALECARLIA
to the
LAKE MÆLER.

LONDON:
Published by T. CADELL, Strand.
Octo: 1st 1790.

SCALE
British Statute Miles 69 & $\frac{1}{2}$ to a Degree
One Swedish Mile of 18.000 Ells. or 10 & $\frac{3}{4}$ to a Degree

extremely difficult to render navigable. The rivers which flow from them into the several lakes are called in the map by the general name of Rhumnatz river, but take local appellation from the lakes which they join, from the villages which they wash, and from the forges which they turn.

For the purpose of examining the several works, we had the honour of obtaining, by the king's command, an order from Baron Sparre to the inspectors of the sluices; we had also an opportunity of inspecting a large plan of the canal, and received from the baron a plan on a smaller scale, which has enabled me to give an engraving of the canal.

The plan was formed by Mr. Alstroem, a celebrated engineer, who laid it before the board of mines in 1776, and rated the expence at £. 40,000. Being rejected by the board as too expensive and difficult, it was patronised and adopted by Baron Sparre, governor of Stockholm, and a fund raised by a society of individuals. The king agreed to allow the proprietors four per cent. for all the money expended during a term of four years, and afterwards prolonged that term until the proprietors should receive a profit of four per cent. It was begun in 1778.

By inspecting the plan the reader will perceive, that in those parts where it was impossible to render the waters navigable, the lakes and streams issuing from these lakes have been joined by the following cuts: Stroemsholm, Waterquarz, Præstfors, Skantze or Traenfors, Alfatra, Magfors, Ramnatz, Seglingsberg, Væstan-

fors, Udnæs, Fagersta, and Simla. Of these the largest is that of Skantzé, which is 8400 feet in length.

In many parts the bed of the rivers have been deepened, and the rock blown away under water by means of machines invented by the celebrated Turnberg, and simplified by Alstroem.

The sluices, which are twenty-five in number, are all 100 feet long, and 72 broad, faced with walls of granite. Of the 25 sluices eleven were finished; and it was conjectured, that if the proprietors could advance the necessary money, the whole might be completed in four years.

September 23. For the purpose of visiting the several parts of this navigation, we made an agreeable expedition from Stroemsholm to Dalecarlia. We had a pleasant drive from the palace through small groves of oak, skirted by a small lake, which is joined by the last cut, and the twenty-fifth sluice, to the Freden; thence through a less agreeable and more open country to Westeros; the high spires of the cathedral rising before us, and presenting a picturesque object from the adjacent country.

In proceeding from Westeros, which I have described in my former tour, and to which description I have nothing further to add, we had some delightful views of the Maeler, beautifully sprinkled with islands, some bare, and some prettily wooded. We changed horses at Kalbäck, on the river which forms part of the canal, which we crossed over a wooden bridge, under which the current flowed with great rapidity. Its channel has been

deepened by blowing up the rocks under water, and nearly finished for the passage of boats; thence coasting the river as it winded through the valley, its navigation occasionally obstructed with shoals which were deepening, we arrived at Skantze. Here we alighted, and called at the director's house, bearing as our passport the letter from Senator Sparre. Unfortunately the director was not at home, and it rained very hard. We contrived, however, to examine the works carrying on between Skantzen and Traengfors, which are the largest and the most difficult of the whole plan. The length of the cut is 8,400 feet, and the depth to be excavated in some places is not less than 80 feet, of which there is much rock. The perpendicular fall of water in this cut is 128 feet eight inches, which is to be broken by eight sluices, of which four were nearly finished. Parts of the cut, which is excavated in the sand, are supported by walls of hewn granite.

We had proposed taking a boat just above the cut now forming at Skantze, and ascending the canal as far as the sluices of Alfatra; but as the rain poured down with great violence, we continued our journey in our carriage, coasted the several lakes and waters which form the inland navigation, and passed the numerous cuts and sluices, some of which we examined. We changed horses at Stoltorp and Rhamnætz, and reached Næs with an intention of crossing over to Virsboe, where we were assured of an hospitable reception at a house belonging to Baron Silverfchiolde. But we did not reach Næs until night had set

BOOK
X.

in; and as it was exceedingly dark, and the weather very tempestuous, we could not find any waterman who would venture to convey us across the lake. We were unwilling to return to Rhamnætz; and it was not without great difficulty we could obtain admittance into a peasant's cottage. Although the hovel which sheltered us was wretched, yet a comfortable fireside and some clean straw appeared absolute luxury to us, pierced with cold, and wet with travelling the whole day in open carts exposed to the incessant rain.

September 24. The windy weather continuing, and the morning appearing cloudy and inclining to showers, we sent for post-horses, proposed returning to Rhamnætz, and proceeding by land to the mines of Dalecarlia, without visiting the remaining parts of the canal, when we were agreeably prevented by the unexpected arrival of Mr. Berger, inspector of the works at Skantze. He brought compliments from Mr. Alstroem, who was sorry he was not at home when we called at his house, and had now dispatched his inspector to offer his services, and accompany us to Virsboe and Væstanfors. We readily accepted this kind offer, and rowed over to Virsboe, delightfully situated on a promontory which projects into the lake. Being hospitably treated by Mr. Ulberg, inspector of the iron forge belonging to Baron Silverfchiolde, we embarked in a six-oared boat, in company with Mr. Berger, who steered. The wind blew very hard, and directly contrary, so that our boatmen were employed five hours in rowing against wind and current the space of fifteen miles. This part
of

of the navigation from Virboe to Væstanfors is entirely complete; and indeed boats have sailed from Væstanfors to the beginning of the works at Traengfors. We rowed across several lakes, and ascended the currents of the rivers which join them. The lakes are very beautiful: of these the Ameningen is about twenty-six miles, and the Stora Aspen twenty, in circumference. The expanse of water is broken with many woody islands, and their shores are fringed with trees growing to the margin of the water, and interspersed with villages.

After five hours rowing against the wind, we at length reached Væstanfors, and landed near the house of Mr. Bedouar, proprietor of an iron foundry. We dispatched our Swedish servant to procure us a lodging, and order what could be prepared for our dinner. While we were waiting in the cold the return of our messenger, Mr. Bedouar came out. He was informed, he said, by Mr. Berger, that we were English gentlemen upon our travels, and had letters of recommendation from Baron Sparoe; either of those circumstances were sufficient inducements to him not to suffer us to look out for a lodging elsewhere than in his house; that we should find but bad accommodations in the village, and that he would absolutely take no refusal. Although extremely unwilling to give so much trouble to a person with whom we were wholly unacquainted, yet we could not reject an invitation so politely made, and so strongly enforced. We accordingly took possession of very comfortable apartments, which, our landlord added, were ours as long as we chose

BOOK
X.

chose to favour him with our company. By this time it was near five, and we were extremely hungry. But as we well knew that the family hour of dining in this country is twelve, we were preparing privately to satisfy our appetites with some bread and cheese, which we had fortunately brought with us, when Mr. Bedouar himself announced to us that dinner was ready; one among many instances of the polite attentions we received from our worthy host.

Having made a hearty meal, we accompanied Mr. Bedouar about the environs. His house is pleasantly situated near a cataract of the river, and commands a fine view of the small lake of Frangen, agreeably skirted with trees, of the adjacent villages of Udnæs and Tagersta, and of the Stora Aspen; the spire of the church of Væstandfors painted of a deep red, and some cottages standing on a gentle eminence, forming picturesque objects on the opposite side of the cataract. The evening having already set in, the beams of the moon glistened in the foam of the descending cataract, and on the agitated surface of the lakes.

The next morning our obliging host prepared a boat, and requested Mr. Lofgren, inspector of the works in those parts, to accompany us to the sluices. We first examined the cut and sluice of Væstanfors, which is 600 feet long, and excavated near the banks of the cataract. The sluice was finished, except the gates. We then embarked, rowed up the lake Frangen, admired its banks, gently waving, and covered with trees, pasture, and arable land, the southern extremity bounded by the church
and

and village of Væstanfors, the northern by the village of Udnæs. We landed on the south side of the cut forming at Udnæs, which is 320 feet long, again took boat above the cataract, and rowed through the Fagersta river, which has been deepened by springing the rocky bed under the water for above 1,600 feet. Fagersta cut is 1,400 feet long, and the greatest depth of the excavation 23. On the side of the cataract is a forge, and a country house of wood painted white belonging to Mr. Bankæus, the proprietor of the iron works. We walked through Mr. Bankæus's garden, and again embarked on the northern extremity of the Fagersta cut, rowed up the river Simla, landed on the southern extremity of the Simla canal, and examined the superb works which are almost finished. The Simla cut is 3,000 feet in length, of which 630 have been hollowed in the rock. The depth of the excavation is 24 feet.

The river in this spot forms a succession of cataracts; and its shores are ornamented with a villa placed in a most romantic situation. In all these parts an iron forge, a country house belonging to the proprietor of the iron works, and a small cluster of houses inhabited by the workmen, hang suspended over each cataract. The roaring of the waters, the beating of the hammers, and the bellowing of the furnaces, seem to strive for mastery.

The northern sluice at Simla is the first sluice of this canal of Stroemsholm; from thence the navigation is open to the Sodra Barken on the confines of Dalecarlia.

No

BOOK
X.

No doubt can be entertained of the utility of this inland navigation, which, when finished, will connect the province of Dalecarlia with the capital; and it reflects the highest honour on the engineer who planned the works; on the sovereign who patronized them; and on the individuals who have risked their fortunes in so arduous an undertaking.

The expence has already amounted to 100,000 rix-dollars, or £. 25,000. 50,000 rix-dollars, or £. 12,500, are wanting; and it is conjectured, that for that sum the whole might be completed in four years.

From this agreeable excursion we returned to Mr. Bedouar's hospitable mansion. The next morning we took leave of our friendly host, to whom we could not sufficiently express our obligations: we departed, and in a few miles entered the province of Dalecarlia. We soon afterwards came to the lake Sodra Barken, passed the small town of the same name, which stands on a promontory dividing the Sodra from the Nodra Barken. The road winded delightfully on the western bank close to the margin of the water; and the view of the lake was enlivened by a number of boats filled with peasants, who were returning from church.

We changed horses at Norbarke, a small village on the north western extremity of the lake, which will become a place of much commerce if the canal of Stroemsholm should ever be completed, as it must be the great depository for the iron, copper,

per, and other commodities which will be transported from these parts to Stockholm.

CHAP.
IX.

From thence we soon entered a wilder country, thickly clothed with forests, passed a succession of hills and vallies watered with numerous lakes and rivulets, and on the close of the evening arrived at Rustgoden, a small village in the province of Dalecarlia. The first appearance of the inn did not prejudice us in its favour; but on entering we found several very comfortable apartments and clean beds; and we had scarcely seated ourselves, when part of the supper which had been prepared for the family was placed before us. It consisted of a cock of the wood, eggs and bacon, potatoes, and pancakes. At any time such a fare would have been acceptable; but it was most unheard of luxury to us, who had fasted from eleven in the morning, and whose appetites had been sharpened by the keenness of the air.

The king, who justly prides himself on his descent from Gustavus Vasa, ordered a wet-nurse for the prince royal to be chosen among the women of Dalecarlia, a province whose natives had first supported Gustavus Vasa, and enabled him to begin those efforts which ended in the expulsion of Christian the Second, in the freedom of his country, and in the establishment of the house of Vasa on the Swedish throne. Accordingly three women were chosen, amongst whom was our landlady. Although she was not fixed upon to suckle the prince, yet she staid some time at the palace of Drottningholm. She shewed us, with much satisfaction, a dress of buff-silk and sky-blue, edged with

BOOK
X.

silver lace, which she received by order of his majesty. From her journey to court, and the presents there received, she has derived great consideration among the peasants of this neighbourhood. In general the peasants of Dalecarlia, who have been always remarkable for their loyalty, were much flattered with the mark of distinction paid to their province; and in the late danger which threatened Sweden from the Russian war, and the invasion of the Danes, (1788) were the foremost in proving their attachment, and in offering their services.

C H A P. X.

Dalecarlia—Memorials of Gustavus Vasa—Oernetz—Copper Mine of Fablun—Cataraet of the Dahl—Gefle—Loeffsta—Iron Mine of Danemera—Passage from Grisleham to Abo—Fortress of Sveaborg.

THE province of Dalecarlia may be called the classical ground of Sweden, being full of memorials, which indicate the veneration of the natives for the memory of their deliverer, Gustavus Vasa, the greatest man whom Sweden, fertile in great men, ever produced, if we estimate the greatness of his actions by the smallness of the means.

CHAP.
X.

It was not without infinite pleasure that I recognized, during this day's journey, the ancient silver mine, in which this father of his country lay concealed, and in which he performed the work of a common miner with such perseverance and alacrity, expecting the lucky moment when he might emerge from his obscurity.

As I stood on the brink of the mine, I figured to myself the Swedish patriot, exciting by the most animated expressions and gestures the Dalecarlian mountaineers to deeds of glory, and

issuing from this subterraneous prison the avenger of oppression, and the deliverer of his country.

Of all the places, most remarkable in the life of Gustavus, and most curious as a memorial of that great man, is Oernetz, the house belonging to Paterfon, in which Gustavus took refuge, where his treacherous host, after receiving him with every apparent demonstration of joy and affection, would have betrayed him to the Danes, if his wife had not preserved him from her husband's treachery. This very identical house now exists in its original state. It is built of wood, painted red, and covered with shingles.

We ascended a spiral stair-case, with a gallery on the outside of the house, and entered the bed-chamber in which Gustavus was concealed. The bed in which he slept is a barrack wainscot bedstead with a straw mattress, but has been ridiculously hung with curtains of blue purple cloth, ornamented with the three crowns, the arms of Sweden, as if any pomp of clothing could add to a piece of furniture, which derives its only merit from its antiquity, and from the memory of Gustavus Vasa.

The inventory of this apartment is exceedingly curious, and consists of the following particulars :

The figure of Gustavus Vasa in complete armour ; his undergarments of blue velvet, laced with gold, the same which he wore when he was alive ; his bow and arrows, wallet and snuff-box, and his bible, printed at Upsala in 1541. The figures of two

Dalecarlians

Dalecarlians in their ancient dress, and armed with weapons common in the sixteenth century. Their clothes and stockings are of white cloth; their hats high crowned, and peaked at top, with large flat rims, not unlike mother Shipton's; a leather girdle round their waists, to which are hung two knives in a leathern case, the same as are still carried by the Swedish and Norwegian peasants; an iron crow for drawing the strings of their cross-bows, and a kind of tinder-box; in their right hands, a cross-bow, and on the left side a quiver of undrest leather filled with arrows. One of these figures is that of Jacob Jacobson, the stable boy, who conveyed Gustavus to the curate's house at Swartzio, when he escaped from Oernetz; another, that of the peasant who tendered him some assistance when travelling in the forest; a third, is the guide, who, in conducting him through the forest, robbed and left him in the greatest distress, but afterwards amply compensated for this act of treachery by joining him, when the Dalecarlian peasants revolted in his favour, and by the bravery and fidelity of his subsequent conduct.

On the stair-case leading to this apartment is the privy, down which Gustavus descended when he escaped from Oernetz. On beholding this privy I shuddered, as if the fate of Sweden now depended on his escape.

The situation of Oernetz, on the borders of a large lake, and in an undulating country, enriched with much wood, is suffi-

*

ently

BOOK
X.

ently delightful to attract the traveller's notice, even if it did not contain memorials of so great a sovereign as Gustavus Vasa.

Having satisfied our curiosity at Oernetz, we continued our journey through a hilly and rocky country, scantily provided with trees, but abounding in mines, to Fahlun. As we approached this town, we were much struck with the desolate appearance of the environs, and the numerous furnaces smoking and infecting the air; while on the other side the eye was relieved from this dreary scene with the view of the lake Run, interspersed with numerous islands.

Fahlun is situated in the midst of rocks and hills, between the two large lakes of Run and Warpen. It contains 1200 houses, and including the miners, 7000 inhabitants. Excepting two churches of brick, roofed with copper, and a few other houses of the same materials, the buildings are principally of wood, and of two stories.

The copper mine, which gives existence and celebrity to this town, is on its eastern side. Although the time of its first discovery cannot be ascertained; yet its great antiquity is proved by its being mentioned in the earliest records of Sweden, and particularly in the charter of Magnus Smek, which renews its privileges, and considers it as existing from time immemorial; from which we may fairly conclude it must have been worked eight or nine hundred years ago.

The mine is private property, and is divided into 1200 shares;
each

each whereof is worth 150 rix-dollars or £.37. 10s. Four times in the week the ore is divided in the following manner: Eleven equal heaps are formed; eight are distributed among eight of the proprietors; the three remaining heaps are sold by auction; of these, one is appropriated to the repairs of the works; the second to pay the salaries of the miners and the other workmen; the third formerly belonged to the king; but has been lately relinquished by his majesty, and is now employed in defraying the expence of making new excavations.

In this manner the ore is equally divided, until the whole number of proprietors have had their respective shares, and then the rotation begins again.

The ore is first roasted in the open air in order to deprive it of its sulphur, and then smelted, and this operation of roasting and smelting is repeated five successive times. It is then brought to the public office, weighed, and divided in the following manner: Of twenty parts the proprietors receive sixteen, the crown two and an half, and the remaining one and an half is appropriated towards the machinery of the mines, and other incidental expences. Each proprietor receives at the office a receipt for the quantity of copper he has delivered in; and this receipt he either sells, or the copper is transported at the common expence to Arfwestadt, where it is refined and worked into plates.

The copper is not found in veins, but in great masses, and does not extend more than an English mile in circumference. The matrix of the ore is the saxum of Linnæus, or rock, and pyrites

of

BOOK
X.

of iron. The richest part of the ore may perhaps yield 20 per cent. of copper; but as the poor and the rich parts are blended, they give only 2 per cent. when first brought from the mine, and 12 per cent. when once smelted.

Large quantities of copper are also annually obtained, by placing numerous pieces of iron into troughs of water, impregnated with blue vitriol, by a process extremely simple and very common in chymical experiments, but which has led ignorant persons to believe, that the iron is changed into copper. The water having a greater affinity with iron than with copper dissolves the iron particles, and lets drop a proportionate number of particles of copper before held in solution, which assume the places of the particles of iron recently dissolved; and as this operation is continual and gradual, the pieces of iron in time are so entirely covered with the particles of copper as to appear to have been converted into that metal.

Twelve hundred workmen are employed; namely, six hundred miners, and the same number in roasting and smelting the ore, in making charcoal, and other works above ground.

The morning after our arrival at Fahlun, we visited the mine, and descended as far as we could penetrate. The mouth or opening is extremely large, perhaps the largest in the world, being 1200 feet in diameter, or near three quarters of an English mile in circumference: an immense chasm, gradually enlarged to its present size by the excavations and frequent downfalls of the rock.

We

We descended this chasm by several flights of wooden steps, till we arrived at the entrance of the first subterraneous gallery; from whence the descent is extremely commodious, not by ladders, as is usual in mines, but down steps cut in the rock, and sloping so gently as to be practicable for the horses employed in bringing up the ore.

I will not describe the miners naked from their waist upwards, and compare them, as they are carrying in their hands small bundles of lighted slips of wood, to the Cyclops; nor will I dwell on the sublimity of those tremendous sounds formed by the explosion of the gunpowder, circumstances common to all mines, and not peculiar to this of Fahlun.

The galleries along which we passed are from six to ten feet high, and sufficiently spacious. The perpendicular depth of the mine from the top of the chasm is 1020 feet, and 720 from the entrance into the subterraneous gallery to the bottom. The commodious stair-case continued till we came to a deep pit, to which we descended by means of a wooden ladder, and afterwards by an iron ladder loosely suspended along the sides of the rock: stepping from thence to a wooden ladder, we reached the lowest part to which we could then arrive, as the lowest pit was full of water.

Our ascent, from its length, was long and tedious, and we employed near four hours before we again issued into day.

The country from Fahlun to Gefle, through the provinces of

BOOK
X.

Dalecarlia and Gestrike, is as agreeable as any parts we have traversed in Sweden, being richly diversified with an alternate succession of forests, rocks, hills and dales, uplands and plains, pasture and arable land, lakes and rivers. But the beauty of the landscapes was more particularly heightened by the Dahl, the finest river in Sweden, which we crossed several times, and coasted its banks, as it flows through a rich and fertile plain: Gefle, the farthest northern point in Sweden to which we pushed our journey, lies in the 63d degree of north latitude, and in the 17th degree of longitude, east from Greenwich. The town is washed by three branches of the river Gefle, which begins here to be navigable for vessels drawing nine or ten feet of water, and falls in a short distance into a bay of the Baltic. Many of the houses are constructed of brick or stone plaistered white, and have a neat appearance. The remainder, as is usual in this country, are of wood. Gefle is the most commercial town in these northern parts of Sweden. Its exports are principally iron, pitch and tar, and planks.

A few miles from Gefle, we ferried over the Dahl to Escarleby, and walked to the celebrated cataract formed by that river, well described by Mr. Wraxall in his Northern Tour. The Dahl flows for some way in a broad and tranquil stream, until its course is interrupted by a ridge of rock and a high island about a quarter of a mile in circumference, which separates its waters into three principal parts, as they dash with unceasing fury, and form a cataract scarcely inferior to the fall of the Rhine at Schaffhausen.

Schaffhausen. The island divides the cataract into two principal falls, of which the eastern fall is the finest.

CHAP.
X.

In winter, or when the river is swollen with violent rains, the waters of the eastern fall cover the whole ridge from the extremity of the island to the banks, and must be much less picturesque than as we saw it, broken into different falls by numerous crags which start up in the midst of the descending deluge. The breadth of the river from shore to shore is near a quarter of a mile, and the perpendicular height of the fall between thirty and forty feet.

The river rushes at the bottom in a narrow channel scarcely a hundred feet broad, struggling for vent with unceasing fury, and foaming at the foot of the island, covered with pines, which overhang the abyss, "silent and astonished spectators of the glorious scene *."

Words must be always deficient in endeavouring to describe a large river, pouring its flood of waters from the rocks, roaring with the noise of thunder, and scattering its foam on the impending woods: neither the pencil or poetry are adequate to the description.

The next morning we arrived at Loeffsta, the seat of Baron Geer, and remarkable for the iron founderies belonging to that nobleman. The house, with the numerous buildings surrounding it, appears like a royal palace, while the uniform rows of

* Wraxall's Northern Tour, p. 158.

BOOK
X.

brick cottages, inhabited by the inspectors and workmen of the forges, architects, smiths, and carpenters, resemble a small town. Here are four foundries, at which not less than 1,500 men are employed. The iron is brought from the mine of Danemora, of which the third part is the property of the baron. The ore is first calcined, then reduced to powder, next melted, and poured upon the sand in large quantities, weighing each from 120 to 160 pounds. In this state it is alternately heated and hammered five or six times, until it is made into bars of iron fit for exportation. Each bar is from 12 to 18 feet in length, from three-fourths of an inch to eight inches broad, and from one-half to three-fourths of an inch thick. These forges of Loeffsta prepare annually from 6,000 to 8,000 shippund, or from 800 to 1,066 ton. It is sold at eight rix-dollars, or £. 2, per 20 pound, and exported to England for our steel manufactures, the Danemora iron being esteemed the finest in the world. As it is exported from Oregrund, an adjacent port in the Baltic, it is usually known in England by the name of the Oregrund iron.

Upon our arrival at Loeffsta, we carried a letter of recommendation from Mr. Arweson to Baron Geer, and, as the baron was shooting, received an immediate invitation to dine with his lady; for such is the hospitality of the Swedes, that any traveller who brings a letter of recommendation is immediately invited to dinner, and is almost deemed guilty of incivility if he does not accept the invitation.

After

After a sumptuous dinner, we continued our journey towards Danemora, which supplies the iron for the forges of Loeffsta, and arrived the same evening at Osterby, the adjacent village, where we took up our abode in a very comfortable inn. The next morning we carried a letter of recommendation to Mr. Grill, who has a large property in the mine of Danemora, an excellent house, and three forges. Mr. Grill kindly reproved us for not coming to his house the preceding evening; and, though he was that instant setting off for Stockholm, insisted upon our dining at his house with his niece, and a select company who were there upon a visit.

After dinner we walked to the mines, which seem to differ from all other mines, inasmuch as they have no subterraneous galleries, but are worked in the open air.

The pits are deep excavations, like gravel pits, and form so many abyffes or gulphs. The descent is not, therefore, as is usual in mines, down a narrow subterraneous shaft. Here I stepped into a bucket, and hung suspended in the open air, in the same manner as if a person was placed in a basket at the top of Salisbury spire, and gradually let down to the ground by a rope and pulley. The inspector accompanied me to the bottom; and while I was placed at my ease in the inside upon a chair, seated himself on the rim of the bucket with his legs extended to maintain the equilibrium. He had in his hand a stick, with which he gently touched the sides of the rock and the rope of the ascending

BOOK
X.

ascending bucket, in order to prevent our bucket from swerving against them, which must have infallibly overset us.

While I hung suspended in mid air, and so giddy, that I could not venture to look down, I observed three girls standing on the edge of the ascending bucket, and knitting, with as much unconcern as if they had been on terra firma; such is the effect of custom! We were about five minutes in descending; and the depth which we reached, before I stepped out of my aerial seat, was 500 feet. Not being a mineralogist, my curiosity was soon satisfied; I again got into the bucket, and was drawn up in the same manner.

In this situation I closed my eyes, and conversed in Latin with the inspector. He informed me, that the richest ore yields 70 per cent. of iron, the poorest 30; that, upon an average, the collective mass gives one-third of pure mineral; that about 12,000 tons are annually drawn from the mines, which yield about 4,000 tons of bar-iron.

The mass of ore occupies a small compass. The length of the pits considered as one is 760 feet, and the breadth from three to twelve. The ore runs in veins from east to west. The richest ore is near 500 feet in depth; and the Storoe Grube is not yet fathomed. The matrix of the ore, being a calcareous earth, consequently contains but little sulphur, which is perhaps the reason of its superior quality.

The mines of Danemora, so renowned for yielding the finest
iron

iron in the world, the greatest part of which is sent to England for the use of our steel manufactures, were discovered in 1488. They consist of twelve pits.

CHAP.
X.

The mines belong to thirteen proprietors; of whom Baron Geer possesses more than one-third. The proprietors work each pit separately, defray the expences, and divide the profits according to their respective proportions.

The ore, which is dug in the summer, is laid out in heaps, and divided in the winter months, from November to March, when it can be conveyed on sledges. Each of the proprietors send it to their respective forges, or sell it on the spot.

Near three hundred persons are employed in mining and in transporting the ore. The miners are paid by the work, and can gain at most 1*s.* 3½*d.* per day, the others can earn 1*s.* 1*d.*

The water is drawn out of the pits by means of pumps worked by water. These pumps are of great length, and occasion considerable expence for repairs. A steam-engine was once employed for this purpose, but obliged to be laid aside on account of the scarcity and dearness of charcoal.

From Danemora we continued our journey to Upsala and Stockholm; and after a few days proceeded towards Ruffia, across the gulph of Finland, by the passage from Grisleham to Abo.

The numerous shoals and rocky islands render this passage extremely dangerous at all seasons of the year, whenever the wind

BOOK
X.

wind is high or the sea rough; and this danger is increased by the unskilfulness of the sailors, and the frail condition of the open boats employed on these occasions. In my second expedition into the north, in 1784, I passed from Grisleham to Abo, and was again exposed to some difficulties.

October 16. We embarked at Grisleham at six in the morning, and a favourable breeze carried us in less than three hours and a half to the small isle of Eckeru, distant about 36 miles from the coast of Sweden. From Eckeru we ferried over the bay of Markfund to Fredenby, on the isle of Aland, and crossed that island to Bomarsund, a small village at its eastern extremity. From that place there are two passages to Abo; the one is to ferry over the several straits and firths to Kumlinge, Brando, and several other small islands, to the continent of Finland, about six miles from Abo; the other is to proceed the whole way by sea from Bomarsund to Abo. As the removal of our carriage from the several boats at the numerous ferries would have been attended with unavoidable delays in the former passage, we preferred the latter, and accordingly hired two open boats to convey us directly to Abo.

The next morning we embarked at seven, and were expeditiously carried forwards by a fine breeze. But as the wind blew fresh, and the sea ran high, a Swedish gentleman, whom we had accidentally met at Grisleham, and who had desired to accompany us to Abo, was suddenly alarmed; and communicating his fears to the boatmen, prevailed upon them to land upon Long Island,

Island, about four miles from Bomersfund. Here they continued three hours upon the beach, resisting all our importunities and offers to induce them to proceed. The wind at length somewhat abating, they were prevailed upon to set sail; but in a short time the sailors (if they deserve that appellation) were soon again seriously alarmed, and their panic was still farther increased by the terrors of the Swedish gentleman, who, like Gonzalo in the Tempest, "would have given a thousand furlongs of sea for an acre of barren ground, long heath, brown furze, or any thing."

At length, the mast cracking towards the bottom, the boatmen took down the sail, and put in at a little island, or rather rock, where we all landed.

It was now two o'clock; and as the sailors declared their resolution of not venturing again to sea till the wind abated, we had the prospect of passing the night on this dreary spot. We accordingly examined our station. It was a small rocky island of red granite, about a quarter of a mile in circumference, yielding a few blades of ruffet-grass, and twenty or thirty stubbed trees; exposed on all sides to "the pitiless winds," and surrounded by inhabitable crags starting up in the midst of the dashing waves.

Having landed our provisions, we made a comfortable meal on some cold ham and chicken, collected some branches, kindled a fire, and felled two trees, in order to supply us with fuel during the cold night we were preparing to pass in so deserted a spot.

BOOK
X.

Towards evening, however, we fortunately overcame the obstinacy of the boatmen, and prevailed upon them by importunities and money to re-embark before it was dusk: but as they were apprehensive of trusting their little bark to the open sea as far as Kumlinge, the nearest habitation in the way to Abo, they returned to Long Island, and landed us about seven at a neat village called Osterwick, where we found good beds and tolerable accommodations, greatly enlivened by comparing our situation with that of the desert island we had recently quitted, on which we expected to have passed a most comfortable night.

The next morning a gentle but favourable breeze carried us above seventy miles, through narrow straits, between numerous islands, and rocky coasts, wild yet sprinkled with trees, to a small village on the peninsula of Finland, about two miles from Abo.

One of the most curious and important fortresses in the Swedish dominions, and perhaps in Northern Europe is Sveaborg, situated near Helsingfors in Finland. In my former tour we were not permitted to visit this fortress for want of an order from the court; but we were more fortunate in this second journey through these parts; his Swedish majesty himself having condescended to command the prime minister, Count Creutz, to give us an order for that purpose. In consequence of this passport, the governor of the fortress sent his boat to convey us to the fortress, and did us the honour to accompany us himself round the works, and to point out what was most remarkable.

About

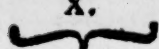
About three miles and an half from the town of Helsingfors are several small rocky islands in the Gulf of Finland, which compose the fortrefs of Sveaborg. They have been lately fortified, in order to maintain a fleet in constant readiness to sail, and to contain a garrison in case Finland should be invaded.

The islands, which compose this fortrefs, are seven in number, and all lie within the circumference of four miles, in the following direction: 1. Long-ön, or Long Island, lies S. W. and is the nearest to Helsingfors; it is 600 feet in length, and 300 in breadth. 2. Waster Swart-ön, or West Black Island, S. E. of Long-ön; 1400 feet in length, and 800 in breadth. 3. Lilla Swart-ön, or Little Black Island, East of Waster Swart; 800 feet square. 4. Oster Swart-ön, or East Black Island, East of Lilla Swart; 3000 feet in length, and 1600 in breadth. 5. Warg-ön, or Wolf's Island, lying in the center between Waster and Lilla Swartz-ön; 2400 feet in length, and 2000 in breadth. It is the principal island, and contains the governor's house. 6. Gustaf's Ward, or the Arms of Gustavus, S. E. of Warg-ön; 1600 feet in length, and 1200 in breadth. 7. Skantz Landet, or Landfortrefs, South of Gustaf's Ward, an island as big as both Warg-ön and Oster Swart-ön, but of which only 600 feet are to be fortified.

The project of surrounding these islands with fortifications was formed by General Ehrenswald, and the work was begun in 1748. £.750,000 have been already expended, and to complete the remainder will require above £.500,000.

BOOK

X.



It is computed, that the whole might be finished in about six years, if sufficient money could be obtained for that purpose; but according to the slow manner in which the work is now carrying on, a century must elapse before its completion.

The works are really stupendous and worthy of the ancient Romans. The walls of the fortifications are chiefly of hewn granite, covered with earth, and are from six to ten feet thick, and in a few places not less than 48 in height. The batteries, which begin upon a level with the water, and rise in tiers one above the other in all directions, commanding the only channel through which large vessels can sail to Helsingfors, render the passage of the enemy's fleet extremely dangerous, if not impracticable.

In Warg-ön is a dry dock, which is capable of containing ten frigates. It is hollowed in the solid rock, is 800 feet long, 200 broad, and about fourteen deep. It is divided into three equal parts by two brick walls, which run lengthways; each part contains four frigates, and may be closed with sluice-gates, so that each vessel lies separately from the others. The whole is covered with a wooden pent-house roof, in order to preserve the frigates from the rain. When I was there this basin contained eleven frigates, which, in case of war, would be removed by letting in the water, and opening the sluice-gates.

At one extremity of this dock is a small basin 200 feet square, closed at each end with sluice-gates, which serves for the entrance and exit of the frigates, and likewise for repairing or building ships.

ships. At the other extremity another basin was quite finished of the same dimensions with the former, for a man of war. This basin may likewise serve for the passage of the frigates, whenever the other is employed in repairing or building ships. The magazines for the ships stores and artillery are built close to the edge of the water, which is of sufficient depth to admit each vessel to lie close to the quay, and be equipped without further trouble.

C H A P.

X.

There is an excellent port for 70 ships of the line, and a small harbour no less secure for ten frigates.

The garrison, in the month of October 1784, consisted of 350 soldiers and 600 marines; but when the whole fortifications are completed, will require 12,000 men.

For the purpose of building ships at Sveaborg, the Swedes procure the oak from Gothland, part of the flax from Finland, hemp and masts from Riga. Such, in October 1784, was the state of the fortifications of Sveaborg; a fortress, which, even in its present unfinished state, will be capable of harrassing the Russians in case of a war, and which, if ever it should be completed, may justly be called the Gibraltar of the north.

T R A V E L S
I N T O
R U S S I A,

B O O K XI.

C H A P. I.

*Addition to the former Description of St. Petersburg—Collection of
Pictures in the Imperial Palace—Plan for the public Schools.*

BOOK
XI.

I Found St. Petersburg considerably improved since my former tour, and several of the public works, which, as they were carrying on, made many parts of the town appear like a quarry of stones, completed, and adding to the ornament and beauty of the capital.

The walls of the citadel were facing with hewn granite; the canal of Catharine was embanked with a wall and parapet of the same materials; and the canal of Fontanka, which is near two miles in length, were also embanked in the same manner, and still further ornamented on each side with an iron railing.

The marble palace, which stands on the banks of the Neva, facing the citadel, was completed. Her majesty gave this superb edifice to prince Orlof; and at his death purchased it from his executors for £. 250,000. The style of architecture is magnificent but heavy. The front is composed of polished granite and marble, and finished with such nicety, and in a style so superior to the contiguous buildings, that it has the appearance of having been transported to its present spot, like the palace in the Arabian Tales, raised by the enchantment of Aladdin's lamp. It contains forty rooms on each floor, and is fitted up in a style of such profusion and splendour, that the expence of the furniture has exceeded £. 200,000.

A magnificent range of buildings has been added to the imperial palace. It joins to the Hermitage, and is so extensive, that it may be called another palace. A superb suite of apartments, chiefly occupied by the empress herself, contains the cabinet of pictures, which I found much finer than I had reason to expect.

This cabinet is principally composed of the following collections:

1. The celebrated collection of Crozat, at Paris, which vied with that in the palais royal belonging to the duke of Orleans. It consisted of more than 370 pieces, including various sketches.

2. The small but well chosen collection of Counsellor Tronchin, of Geneva; in which may be particularly noticed several
by

BOOK
XI.

by Teniers; and a Christ bearing the cross, by Ludovico Caracci, half length, of the natural size; the countenance expressive of that meek dignity by which the founder of the Bolognese school has peculiarly characterised the Saviour of mankind.

3. The collection of Count Bruhl, remarkable for twelve Woverman's; a Holy Family, by Vatteau; an Ecce Homo, by Michael Angelo Caravagio; a painter who succeeded in delineating simple nature and low life, but was extremely deficient in treating dignified subjects.

4. Part of the collection of the Chevalier Baudouin, purchased at Paris; the possessor reserving to himself several landscapes by the Dutch masters, and Vernet. Among the pictures which came to the empress, I observed several excellent paintings by Rubens and Vandyke, particularly an inestimable head of Henry the Fourth, by Rubens; a Study after Nature, for the Luxembourg gallery, greatly expressive of that vivacity and *bon-homme* which characterised that amiable monarch; two, by Ferdinand Bol; several, by Rembrandt, in his strong but uncouth manner; and two lovely groupes of childrens heads, in the characters of angels, by the inimitable Corregio.

5. The collection of Houghton-house, the loss of which every lover of the arts must sincerely regret, and upon which I need not enlarge, as the pictures are well known, from the catalogue published by the honourable Horace Walpole, and from the engravings by Boydell.

6. A

6. A collection from Venice, containing several, by old Palma, Titian, Paul Veronese, and the Bassans; many of which are, however, very doubtful whether they are originals.

CHAP.
I.

Of the Roman school the empress possesses four undoubted originals, by Raphael. 1. A Holy Family, in that great master's best manner, and in the highest preservation. 2. Portrait of Cardinal Pole, also in his best manner. 3. A St. George, of which there is an engraving by Vosterman. These three paintings from the cabinet of Crozat. 4. The Last Supper, an undoubted original, but in bad condition.

I must not omit an old and an excellent copy of the School of Athens, of which the original picture, for composition, correctness of design, and just delineation of character, stands unrivaled in the art of painting.

Several fine landscapes by Claude Lorraine, the painter of nature; and two delightful landscapes by Gaspar Poussin, in which that poetical painter, so remarkable for his picturesque pencil, has delineated towers and battlements,

“Bosomed high in tufted trees;”

and in which he realizes the beautiful imagery described in the *Penferoso* of Milton:

“And when the sun begins to fling
His flaming beams, me, goddess, bring
To arched walks of twilight groves,
And shadows brown that Sylvan loves,

Of pine or monumental oak,
Where the rude axe with heaved stroke
Was never heard the nymphs to daunt,
Or fright them from their hallowed haunt."

By Salvator Rosa, the well-known picture of the Prodigal Son, from the Houghton collection; Democritus and Protagoras, not less celebrated; and several fine landscapes.

Of the Bolognese school, two Guercinos, and several invaluable pieces by Guido Rheni. Besides the celebrated picture of the doctors consulting on the immaculate conception of the Virgin Mary, from the Houghton collection, I could not sufficiently admire that delightful painting, known by the name of *Les Couseuses*, from the Crozat collection. That charming picture represents an aged governess superintending several young women at work, who are models of perfect beauty, unaffected grace, and serene innocence. These two paintings are of themselves sufficient to exculpate Guido from the censures of those connoisseurs, who, judging hastily from a few specimens, indiscriminately accuse him of always sacrificing too much to the graces, and of introducing affected attitudes.

The cabinet contains also a few pictures by Battoni and Mengs, in whom the genius of the Roman school seems to have expired. Of Battoni, Thetis approaching Charon with her infant Achilles asleep is not without merit.

Three pictures by Mengs deserve to be mentioned: 1. *Perseus and Andromeda*, in which that painter has erred against
Costume,

Costume, by representing the hero naked, and Andromeda half clothed. The author varied somewhat from his original design, which was an exact copy of the basso relievo of the Faustina, on the pedestal of a column at Rome, and on which is engraved, Pietro Santo Bartoli. With respect to the drapery, Mengs seems to have adopted that from the gem of Callyrrhoe, the Bacchanalian Woman. 2. The Judgment of Paris, a very fine picture. 3. St. John preaching in the wilderness, a single figure; his air and motion are dignified. Mengs finished this picture for his friend M. de Liana, formerly envoy to the court of Parma.

In order to distinguish St. John, the artist drew on one side of the picture the head of a sheep badly executed. Mengs having copied this picture for a friend, omitted the sheep's head, and inserted in its place a trunk of a tree, which had a picturesque effect. The St. John, in the empress's collection, is a third copy of the same subject; the figure, though of a smaller size, being the same as in the two former, and the sheep's head is omitted. Mengs has not in this instance alone re-copied his figures. He painted his own portrait for Mr. de Saphorin, and from this picture he made several copies; one he sent to the gallery of Florence, a second is at Turin, a third at Madrid, and a fourth in the possession of his friend, Mr. Azara, at Rome.

This circumstance sufficiently shews, that the great masters frequently copied their own works; and proves the possibility of finding several paintings in the different collections, which, al-

BOOK
XI.

though exactly the same, are equally originals. In general the master orders his best scholars to copy the outlines, which he corrects and re-touches. The scholars then sketch the remainder, and the master revises and finishes the whole.

The question, which is the original? is frequently puerile; for sometimes the second is better and more studied than the first. Indeed, when the painter employs his scholars too much in these copies, as Rubens was accustomed to do, the perfection of the original usually suffers by these frequent repetitions; as the hasty touches of the master cannot correct the defects of the scholars.

It is a well-known anecdote, that Raphael himself mistook a copy of one of his own pictures, done by Andrea del Sarto, for the original. Three paintings of his celebrated John the Baptist are now existing, of which it is impossible to discover which is the finest, or which is the original. One of these is in the great duke's gallery at Florence, a second in a private collection at Rome, and the third in the palais royal at Paris.

Under the same circumstances may also be mentioned the celebrated portrait of Lord Strafford dictating to his secretary, of which I have seen three, one at Wentworth house, the second at Wentworth castle, and the third at Blenheim.

The empress continues to prosecute her great plans for the interior civilization of her vast empire with unwearied zeal. But of all the plans formed by her majesty for this purpose, there is none more useful and praise-worthy than that for

the establishment of schools in every government, formed on the most comprehensive scale and liberal principles.

CHAP.

I.

An academy is established at St. Petersburg for the instruction of 200 students, designed to be masters of the provincial schools. This academy is provided with professors of history, mathematics, rhetoric, and natural history; with a German master, and a drawing master.

The students are selected from the different seminaries of the Russian empire, and, as they have received their education as priests of the regular clergy, understand Latin. They are twenty years of age, and are to remain at Petersburg three years; during which period they are instructed in history, geography, the various branches of natural philosophy, and natural history. They are all boarded, lodged, and instructed at the empress's expence.

At the conclusion of this term their places are to be supplied by others, and they will be distributed in the different parts of Russia. Two of these students will be established in the principal town of each government; one as teacher of mathematics, the other of history, geography, and natural history. Each student, thus established, is to instruct other students as preceptors of the smaller schools in the lesser towns.

The regulation of this useful establishment is entrusted to a committee consisting of five members, who have the superintendence of the whole.

Thus the great schools in the principal towns will depend on the academy of Petersburg, and each school in the smaller towns

BOOK
XI.

towns on the principal school in each government; a scheme which, if it can be carried into execution, will be most effectual in promoting the interior civilization of this vast empire. But it is to be feared, that these great plans of interior civilization and improvement have been interrupted by the expensive war with Turkey and Sweden.

C H A P. II.

Additional Remarks on the Population, Revenues, and Army of Russia.

IT was not without the utmost diffidence, that in my former volumes * I ventured to attempt conveying a general idea of the population of the Russian empire, without having been able to procure any certain documents upon so complicated a subject.

CHAP.
II.

Having fortunately obtained, during my second journey to Russia, the following table of the peasants assessed by the poll-tax, in 1782, I can now lay before the reader, with greater confidence, a more exact statement of the inhabitants which compose the Russian empire; and can feel myself justified, that in my former account I did not exaggerate, but rather decreased their real number.

It is necessary to observe, that by a late regulation the peasants of Livonia, and of the Ukraine, and of the provinces conquered from Sweden, now pay the poll-tax, which enables us to ascertain their numbers with a greater degree of certainty.

* Book VI. Ch. i.

LIST

BOOK LIST of the Peasants paying the POLL-TAX in the separate
 XI.
 Governments.

Government of Moscow	-	-	-	440,359
St. Petersburg	-	-	-	283,295
Wiburgh	-	-	-	88,128
Tver	-	-	-	446,321
Novogorod	-	-	-	269,320
Pskof	-	-	-	288,125
Smolensko	-	-	-	445,257
Mohilef	-	-	-	331,033
Polotzk	-	-	-	311,462
Orel	-	-	-	462,520
Kursk	-	-	-	458,830
Karkof	-	-	-	392,944
Voronetz	-	-	-	394,934
Tambof	-	-	-	438,025
Refan	-	-	-	434,679
Toola	-	-	-	418,927
Kaloogha	-	-	-	384,423
Yaroslaf	-	-	-	370,961
Vologda	-	-	-	349,386
Volodimir	-	-	-	433,820
Kostroma	-	-	-	396,269
Nishnie-Novogorod	-	-	-	398,317
Viatka	-	-	-	407,950
				Government

Government of Perm	-	-	-	373,252
Tobolsk	-	-	-	166,225
Kolyvan	-	-	-	39,297
Irkutsk	-	-	-	123,232
Ufa	-	-	-	177,798
Simbirsk	-	-	-	361,159
Kasan	-	-	-	373,354
Penza	-	-	-	318,076
Saratof	-	-	-	282,817
Astrachan	-	-	-	23,776
Asof	-	-	-	177,849
New Russia	-	-	-	210,539
Kiof	-	-	-	387,792
Tchernighof	-	-	-	368,099
Novogorod Sieverski	-	-	-	365,541
Riga	-	-	-	263,525
Revel	-	-	-	99,564

CHAP.
II.

Sum total of peasants paying the Poll-tax - 12,757,180

By doubling this number for the females, we have for the peasants,
male and female, in the whole Russian empire - 25,514,360

To this we must add nobles - 200,000
Clergy and their families - 120,000
Merchants and families - 250,000

VOL. III.

G g

Natives

BOOK XI.	Natives of Crim Tartary and the Kuban	-	-	80,000
	Wandering hordes of Siberia	-	-	600,000

And the total population of the Russian empire
will, according to this calculation, be - - 26,764,360

A number, however large, greatly disproportioned to the extent of the empire.

Since I gave also to the public the general account of the Russian Revenues *, several changes have taken place in the assessment of the poll-tax; and some augmentations have been made in the other branches of the revenue, which it will be necessary to mention and explain, in order to form a more accurate statement of the Russian finances, which my subsequent travels enabled me to collect.

But first it will be proper to premise, that in my former work, when I reduced the Russian money to the English standard, I estimated the average value of the rouble at 4s.; and consequently five roubles at a pound sterling, which, in 1776, when I first visited Russia, was the average value.

When Peter the Great reformed the coinage, he proposed making the value of a rouble equal to a rix-dollar, or about 4s. 6d.; at which value, with a small fluctuation, owing to accidental circumstances, it continued till the commencement of the

* Book XI. Ch. vi.

Turkish war in 1770. Since that period the alteration of the coin has reduced the intrinsic value, as tried in the mint of London, to 3*s.* 2*d.* The excess of the imports above the exports, the number of remittances necessary for the payment of the troops employed against the Turks, and the great quantity of paper money in circulation, have also still farther contributed to diminish the value of the rouble in exchange with foreign countries; and in the course of 1789, the rouble has been more than once so low as 2*s.* 4½*d.* and its present value, in 1790, scarcely exceeds 2*s.* 6*d.*

But as this diminution is owing to circumstances not permanent in their nature, it may be presumed, that at the termination of the war the nominal value will, as in most cases, soon exceed the intrinsic value of the rouble, we may therefore fairly rate the average value at 3*s.* 4*d.* or six to a pound sterling.

In my former account, for the year 1776, I stated the amount of the Russian revenue in time of peace, at £.6,144,968, or, as I then estimated a pound sterling as only equal to five roubles, at 30,724,840 roubles.

Since that period the revenue has been considerably augmented in the following articles:

First, In regard to the poll-tax.

This assessment, which was not levied in the Ukraine and the provinces conquered from Sweden, namely, Livonia, Esthonia, Ingria, and Carelia, now comprised within the governments

BOOK
XI.

of St. Petersburg, Revel, Riga, and Wiburgh, was, in 1782, extended to those parts of the Russian empire; and the other taxes paid by the peasants were abolished.

This alteration has greatly benefited the public revenue; and the poll-tax is considerably more productive than before, not only from this circumstance, but also from the increase in the number of peasants since the revision of 1764. And as some peasants are assessed at more than two roubles, and others at less than one rouble, we may perhaps place the average tax paid by each peasant at a rouble and a quarter. From this computation the poll-tax produces 15,435,000 roubles, or nearly double its former produce.

Secondly, The customs have been considerably increased; those of Narva, Riga, Revel, and Archangel being placed upon the same footing as those of Petersburg, and additional duties having been laid on the exports and imports.

From these and other augmentations we may venture to give the following statement of the Russian revenues in time of peace.

				Roubles.
Poll-tax	-	-	-	15,435,000
Customs	-	-	-	5,000,000
Salt	-	-	-	2,000,000
Gold and silver from the mines, profits of the coinage, and duty on iron at the forge	-	-	-	3,395,910
Farm of spirituous liquors	-	-	-	10,000,000
				Church

REVENUES OF RUSSIA.

229

Church lands	-	-	-	2,000,000	CHAP. II.
Duties on sales of lands and houses, stamped paper, on mills, horses, baths, shops, post-office, and other duties omitted	-	-	-	4,000,000	
				Roubles — 41,830,910	

Or, estimating the rouble at 3*s.* 4*d.* at £ 6,938,485.

But while we state the augmentations of the revenue, we must likewise not omit the increase of the expenditure since 1776, by the establishment of the new governments, and the foundation of the public schools, which cannot be estimated at less than 5,000,000 roubles, or nearly £. 800,000.

The account of the Russian army, in my former publication, was still more defective than the statement of the population and finances; and, in my second tour, it was not without the greatest difficulty I could procure the following list of the regular troops on the peace establishment.

STATE of the RUSSIAN ARMY, 1785.

- | | |
|--------------------------------------|---|
| 1 Regiment horse guards. | This corps is called
10,000 men, but does
not exceed 3,000, and
probably never will. |
| 3 Ditto foot guards. Preobrazhinsky. | |
| Ismoilofsky.
Semenofsky. | |

1st Division.

BOOK
XI.

1st Division. ST. PETERSBURGH AND PLESCOF.

- 1 Field Marshal.
- 1 General in Chief.
- 4 Lieutenant Generals.
- 7 Major Generals.

Number of men and officers.

1 Regiment, carabiniers. Plescof	- -	942
1 Ditto, dragoons.	- St. Petersburg	1,872
Total cavalry		- 2,814

I N F A N T R Y.

2 Regiments, grenadiers.	{ Life grenadiers		4,188	
	{ Sophiinsk		- -	4,188
				8,376
14 Field regiments.	- Revel	- -	2,094	
				14
				29,316
				Beloverskoy.
				Plesverskoy.
				Koporskoy.
				Archangel.
				Navaginsk.
				Refan.
				Velikolutski.
				Tinguinsk.
Carried forward				- 40,506

ARMY OF RUSSIA.

231

Number of men,
officers included.

CHAP.
II.

Brought forward - 40,506

Narva.

Kexholm.

Nevfky.

Staroskolfk.

Negomfk.

Total 1st division - 40,506

2d Division.

U K R A I N E.

1 Field Marshal.

1 General in Chief.

3 Lieutenant Generals.

5 Major Generals.

1 Regiment, cuirassiers. St George - - - - 742

10 Regiments, carbiniers. Kiof - - - - 942

Tchernigof. 10

9,420

Seversk.

Glukof.

Sophiisk.

Lubenskoy.

Tver.

Neyinsk.

Staradubsk.

Perejoiloff.

Carried forward - 10,162

TRAVELS INTO RUSSIA.

BOOK
XI.Number of men,
officers included.

	Brought forward	-	10,162
6 Regts. light horse.	Achtiursk	- -	1,083
	Kaskoff.		6
	Sumfk.		6,498
	Ostrogjsk.		
	Duteronisk.		
	Sonisk.		
	Total cavalry		16,660
7 Regiments, infantry.	Tomfk	- -	2,094
	Sief.		7
	Brianfk.		
	Total infantry		14,658
	Elitz.		
	Riga.		
	Suzdolsky.		
	Polotskoy.		
	Total 2d division	-	31,318

3d Division

M O S C O W.

- 1 General in Chief.
- 2 Lieutenant Generals.
- 4 Major Generals.

2 Regiments,

ARMY OF RUSSIA.

233

		Number of men, officers included.	CHAP. II.
2	Regiments, carabiniers. Moscow	- - 942	<u> </u>
	Rostof	- - 942	
		<u> </u> 1,884	
1	— cuirassiers. Cazan	- - - - 742	
	Total of cavalry	- 2,626	
7	Regiments, infantry.		
	St. Peterburgh } Grenadiers - { 4,188		
	Moscow - - } Grenadiers - { 4,188		
		<u> </u> 8,376	
	Pennskoy - - 2,094		
	Yaroslaf. 5		
		<u> </u> 10,470	
	Alinopolsk.		
	Toola.		
	Cazan.		
	Total infantry	- 18,846	
	Total infantry and cavalry, 3d division	- 21,472	

4th Division. EKATCRINASLAF AND CRIMEA.

- 1 Field Marshal.
- 1 General in Chief.
- 5 Lieutenant Generals.
- 11 Major Generals.

VOL. III.

H h

1 Regiment,

BOOK
XI.Number of men,
officers included.

1	Regiment, cuirassiers. Ekaterinofslaf	- -	742	
1	— carabiniers. Refan	- -	942	
			<u> </u>	1,684
9	— light horse. Paulogratz	- -	1,083	
	Marinopolsk.		9	
	Alexandriisk.		<u> </u>	9,747
	Olivinopolsk.			
	Kherfon.			
	Constantinogratz.			
	Tamiginisk.			
	Pultava.			
	Isiamisk.			
			<u> </u>	
	Total cavalry	-		11,431

I N F A N T R Y.

11	Regiments. Ekaterinofslaf	} grenadiers.	- -	4,188	
	Tauritza		-	4	
	Phanagorisk			<u> </u>	16,752
	Kiof		- -		
	Orlof	- -	-	2,094	
	Koslof.		<u>7</u>		
	Vialskoy.			<u> </u>	14,658
	Total infantry	-		<u>31,410</u>	
	Carried forward	-			42,841

Number of men.
officers included.

CHAP.
II.

Brought forward - 42,841

Kursk.

Tambof.

Taurichetz.

Troitzk.

Total 4th division - 42,841

Corps cantoned from Astracan to Tiflis, making part of the
4th division, commanded by

1 Lieutenant General.

5 Major Generals.

2 Regts. dragoons. Astracan - - - 1,872

Taganrock - - - 1,872

3,744

9 — infantry. Astracan, grenadiers - 4,188

Kunitfk - 2,094

Kabardinia. — 16,752

Moscow.

Selenginskoy.

Nizof.

Niezshninovogorod.

H h 2 Carried forward 24,684

Brought forward	-	24,684
Butuirkoy.		
Voronetz.		
Total	-	<u>24,684</u>

5th Division.

NOVOGOROD.

1	General in Chief.		
1	Lieutenant General.		
2	Major Generals.		
1	Regt. cuirassiers. Great Duke's	- -	742
1	— carabiniers. Kargopol'sk	- -	942
			<u>1,684</u>
4	— infantry. Novogorod	- - -	2,094
	Siburg.		4
	Schluffelburgh.		<u>8,376</u>
	Tobol'sk.		
	Total 5th division	-	<u>10,060</u>

6th Division.

VALODIMER AND VORONETZ.

1	General in Chief.	
1	Lieutenant General.	
4	Major Generals.	
		2 Regts.

ARMY OF RUSSIA.

237

		Number of men, officers included.	CHAP. II.
2 Regts. carabiniers.	{ Jugermanland - - -	942	{
	{ Narva - - - - -	942	
2 — dragoons.	{ Nishnie-novogorod -	1,872	
	{ Volodimir - - - -	1,872	
4 — infantry.	Shirvan -	2,094	
	Rostof. ———	4	
	Apekeronskoy. ———	8,376	
	Azof.		
	Total 6th division -	14,004	

7th Division.

S M O L E N S K O.

1 General in Chief.			
1 Lieutenant General.			
3 Major Generals.			
1 Regt. life cuirassiers.	- - -	742	
2 — carabiniers.	Jamburg } Riga - - }	942 = 1,884	
4 — infantry.	Siberia, grenadiers -	4,188	
	Smolensko	2,094	
	Uglits. ———	3	
	Ingermanland ———	6,282	
	Total 7th division -	13,096	

8th Division.

BOOK
XI.

8th Division.

T A M B A F.

1 General in Chief.

1 Lieutenant General.

2 Major Generals.

Number of men,
officers included.

1	Regt. light horse.	Elizabethgratz	-	1,083
4	— infantry.	Troitzk	-	2,094
		Lodago.	4	
		Volodimer.		8,376
		Maromsk.		
		Total	—	9,459

9th Division.

W H I T E R U S S I A.

1 General in Chief.

1 Lieutenant General.

1 Major General.

2	Regts. dragoons.	Smolensko	}	1,872	=	3,744
		Kinburn				
4	— infantry.	Dnuperopskoy	}	2,094	=	8,376
		Polotskoy				
		Tschernigoff				
		Vologolskoy				
		Total		—		12,120

10th Division.

ARMY OF RUSSIA.

239

CHAP.
II.

10th Division. ORENBURG.

1 Lieutenant General.

2 Major Generals.

Number of men,
including officers.

3 Regts. light horse.	Voronetz - -	} 1,083	=	3,249
	Pfiumsk - -			
	Ukraine - -			
2 Battalions, infantry.	Oremburg -	} 1,046	=	2,092
	Tschernogratz -			
Total		—		<u>5,341</u>

CORPS OF SIBERIA.

1 Lieutenant General.

2 Major Generals.

1 Regt. dragoons.	Siberia - - -			1,872
2 Batts. infantry.	Ekaterinenburg	} 1,046	=	2,092
	Semiupolsk -			
Total		—		<u>3,964</u>

LIGHT TROOPS.

12 Regts. regular Cossacks, of 942 men - - 11,304
irregular ditto, divided into regiments
of 500 each from the Don and the

*

Yaic

Yaic or Ural (since Pugatchef's revolt) called Uralian Cossacks—Number not to be ascertained.

Kalmucks—The same.

2	Battals. grenadiers.	Kharcofs	-	$\frac{1}{2}$	1,047	—	2,094
8	—	Fufileers.	Moscow	-	$\frac{4}{4}$	1,026	— 8,208
			Kharkoff	-			
24	—	Chaffeurs.	Tauritchitz	-	$\frac{4}{4}$		
			Caucafus	-	$\frac{4}{4}$		
			Livonia	-	$\frac{4}{4}$	990	— 23,760
			Bog	-	$\frac{4}{4}$		
			Belorufky	-	$\frac{4}{4}$		
			Finland	-	$\frac{4}{4}$		

45,366

RECAPITULATION.

	Cavalry.	Infantry.	Artillery.
1st Division - - - - -	2,814	— 29,316	
2 - - - - -	16,660	— 14,658	
3 - - - - -	2,626	— 18,846	
4 - - - - -	11,431	— 31,410	
Lieut. Gen. Potemkin's corps	3,744	— 20,940	
			5th Division

ARMY OF RUSSIA.

241

	Cavalry.	Infantry.	Artillery.	CHAP. II.
5th Division - - - -	1,684	8,376		}
6 - - - - -	5,628	8,376		
7 - - - - -	2,626	10,470		
8 - - - - -	1,083	8,376		
9 - - - - -	3,744	12,120		
10 - - - - -	3,249	2,092		
Corps of Siberia - - - -	1,872	2,092		
Light Troops, Regular - -	11,034	34,062		
Irregular - - - - -	—	—		
Artillery - - - - -	—	34,000		
	<u>68,465</u>	<u>235,134</u>		

To this may be added 98 garrison battalions of different establishments, consisting of recruits and invalids, mixed, which do the duty of the places, no field regiment, excepting four for the garrison of Petersburg, and two for that of Riga, being employed in that line. The artillery has eleven garrison battalions for the same purpose.

Computed Force of the Establishment of the Russian Army, 1785.

Guards, horse and foot - - - -	10,000
Regular cavalry - - - -	69,465
VOL. III. I i	Regular

BOOK. XI.	Regular field infantry and artillery	-	-	235,134
	Garrison battalions, on an average, 500 each	-	-	49,000
	Artillery ditto	-	-	5,500
Total				<u>369,099</u>

Irregulars not included.

Such was the state of the Russian army upon paper; but the real number of effective men always falls far short of this nominal list. And although, considering the number of distant garrisons, the extent of the empire, and the difficulty of obtaining intelligence, it is impossible for a traveller to ascertain the exact state of the army, yet it is probable that the effective troops on the peace establishment scarcely exceed 200,000; and it is remarkable, that notwithstanding the sum total of 369,099, the Russians can seldom bring into the field more than 100,000 effective men.

C H A P. III.

Congelation of Quicksilver.—Dr. Guthrie's Experiments to ascertain the freezing point of mercury, and to prove that the purity or impurity of the mercury by no means affects its congelation.

AS the curious experiment of freezing quicksilver was first discovered at Petersburg by Professor Braun, I was greatly desirous of being a witness to the repetition of the same process; particularly as many doubts had been entertained by several philosophers, concerning the real congelation of *pure* quicksilver, and I had frequent opportunities of seeing this phenomenon during a series of experiments made by Dr. Guthrie, physician to the Imperial Corps de Cadets.

CHAP.
III.

Having inserted a tube containing some quicksilver in a mixture of snow and spirit of nitre, he took it out in about ten minutes, and placed it in a second mixture, and in about five minutes the quicksilver was perfectly congeled. The tube being broken, the quicksilver appeared in a solid mass like a ball of silver, and being struck with a hammer was flattened into twice its extension before it broke and liquefied.

But as the hammer was much warmer than the frozen quicksilver, it immediately melted the parts which it touched, seeming to have the same effect upon the mercury as a warm iron would have upon wax. I desired, therefore, Dr. Guthrie to place the

BOOK
XI.

hammer also in the freezing mixture, so as to acquire the same degree of cold as the frozen quicksilver. Another portion of quicksilver being congeled by the same process as before, I took out the hammer, and struck the solid mass of quicksilver as hard as I could; it resisted the stroke, and yielded a dead sound like lead; I struck it again, and made a small dent; a third time, and made a larger dent, until it gradually extended and flattened under the hammer, separated like an amalgama of the consistence of cheese, and soon liquefied.

To me the congelation of quicksilver was a matter of mere curiosity; but the doctor's experiments tended not only to prove its absolute congelation, but likewise to ascertain exactly the freezing point, and to shew, contrary to the opinion of several philosophers, that the purity or impurity of the mercury did not in any wise affect the success of the experiment.

As the subject is in itself extremely curious, and rendered still more interesting by the very able treatise published by Dr. Blagden, Secretary of the Royal Society, in the Philosophical Transactions, on the History of the Congelation of Quicksilver, I shall here insert a summary account of the experiments and observations communicated by Dr. Guthrie himself. I shall only add, that I myself was witness to most of the experiments mentioned in the following account.

“Mr. Joseph Adam Braun, Professor of the Imperial Academy of Sciences of St. Petersburg, discovered, in December 1759, that mercury might be rendered solid by means of artificial cold; and
since

since that time it has been congeled in severe winters by the cold of the atmosphere in the northern countries of both the old and new continent."

This congelation of mercury by the natural cold, renders the knowledge of its freezing point a matter of great importance to the natural history of the earth as well as of man, as by determining the degree of cold necessary to effect this phenomenon, we shall be able to form an estimate of the real degree of cold obtaining in the countries near the poles, and consequently of the power inherent in living animals to resist it. Until lately our ideas on this subject were confused and erroneous. The experiments and observations of the most able naturalists in different parts of Europe and America were only of partial use to natural history and physics, by giving a place to mercury amongst the malleable metals, and by demonstrating that there is nothing essentially fluid in its nature, but that it is a metal which melts with a less degree of heat than the others.

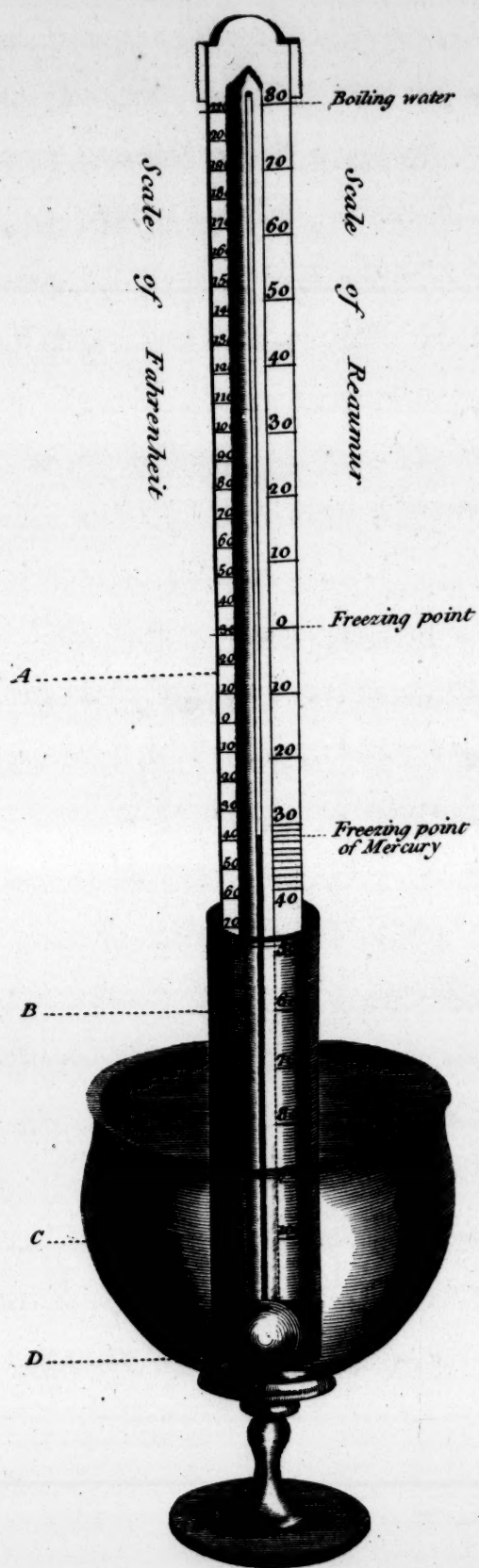
But still the philosopher was not informed what reliance he could place on the mercurial thermometer towards determining the cold of climates, as the motions of the quicksilver appeared by those very experiments extremely irregular in the lower parts of the scale, falling many degrees in an instant, and after it had descended below a certain point sinking suddenly into the bulb, and thereby indicating (if any conclusion could be drawn from its descent) that the animals of the northern countries could resist the action of cold some hundred degrees below the freezing

freezing point of water. This supposition staggered the faith of many philosophers, and made them anxious that the matter should be more fully investigated. Accordingly the Royal Society of London desired its members residing in cold countries to turn their attention towards determining the point of congelation of mercury, and to remark the descent of the mercury in the thermometer during the process from the freezing point of water to that of mercury, in order to form a juster notion of the real contraction of that metal. But it was not till lately that light was thrown on the subject, by a course of experiments made at the desire of the Royal Society, by Mr. Hutchins, governor of Hudson's Bay, who received excellent instructions from Mr. Cavendish, and Dr. Black, professor of chemistry in the university of Edinburgh. These directions, and an apparatus made in London for the purpose, enabled the governor to perceive, that the sudden and considerable descent which takes place in the lower parts of the thermometer, when exposed to great cold, happens from the contraction of the metal in its frozen state, and does not affect the regularity and justness of its contraction whilst it remains fluid. This great point was principally ascertained by means of a spirit thermometer, which was found not to freeze as soon as the mercury, and thereby indicated the degree of cold produced by his frigorific mixture, when the mercurial thermometer ceased to measure it on account of its contraction on becoming solid.

In order to prove, that the descent of the mercury in the thermometer



7



Apparatus for freezing Quicksilver.

mometer was derived from this new discovered principle, namely, the contraction of this metal in freezing, and to try whether pure mercury required a greater degree of cold to freeze it than adulterated mercury, I made the following experiments with the following sorts of mercury:

1. I procured from Mr. Winterberger, a famous chymist of St. Peterburgh, the purest mercury known to chymists, viz. revived from calomel by filings of iron. 2. From Dr. Pallas' native mercury, collected in a mine where no other metal is found but a little iron. 3. Common barometer mercury, furnished by Mr. Morgan, an English optician at Peterburgh, just as he received it from England for filling his instruments. 4. Six drachms of common mercury, which I adulterated by dissolving in it a quarter of a grain of tin foil.

I procured also some thermometers made with great care and accuracy by Mr. Morgan, filled with the same purified mercury, N° 1. for the express purpose of these experiments; also one with highly rectified spirits of wine, distilled by Mr. Winterberger.

Adjoined is a drawing of the apparatus I employed in these experiments, and which was suggested to me by my learned friend Dr. Black: it differs from that employed by Mr. Hutchins in being more simple, and consequently the mercury easier to be examined during the process of congelation. It consists of a half pint water-glass C, wrapped round with coarse flannel, and filled with fuming spirit of nitre and snow to produce arti-

I .

ficial

ficial cold; a glafs tube B, of about half an inch diameter, containing a little mercury to be frozen, and in this tube is inferted a thermometer A, fo that its bulb is buried in the mercury, but no part of the ſtem: the tube and thermometer thus arranged, are placed in the above-mentioned water-glafs, containing the freezing mixture.

December the 22d, 1784. In a calm clear evening, Reaumur's thermometer at 17 degrees below O, after having expoſed the apparatus on a table in my court-yard (where I made my experiments) for two hours, to acquire the temperature of the atmosphere, I poured a little of the purified mercury, N° 1, into the glafs tube, and having inferted a thermometer filled with the ſame purified mercury, ſo that its bulb was covered with the mercury in the tube, I placed them in the water-glafs, filled with the freezing mixture, and in fix minutes transported them into a ſecond, with ſimilar contents; the mercury in four minutes more became ſolid, and when I drew out the thermometer, with the frozen mercury ſurrounding its bulb in the form of a ſolid cylinder, it ſtood at $32\frac{1}{2}$ degrees below O. Perceiving, however, a little fluid mercury ſtill remaining in the tube, I immediately replaced the thermometer with the mercury adhering to its bulb, and in a few minutes the mercury roſe about half a degree; when drawing it up a ſecond time, I found the mercury was melted, and the bulb quite free from it. Now this experiment appeared deciſive, that the freezing point of pure mercury is at $32\frac{1}{2}$ degrees below O on this thermometer; for as there remained a
little

little mercury still fluid in the tube, there seems to have been only produced sufficient cold to freeze it, and as on its rising half a degree the mercury became fluid, the point of congelation seems to be accurately determined.

Second experiment.—On the 9th January, 1785, between the hours of six and half past seven in the evening, I made the following experiments in presence of Mr. Epinus, Mr. Coxe, and other gentlemen; I inserted the mercurial thermometer used in the last experiment in a portion of the purified mercury, N° 1, and placed them in the cold mixture: the thermometer fell slowly to $32\frac{1}{2}$, and was there stationary some time, whilst we perceived the mercury in the tube freezing round the sides of it, so as to produce a coating like tin foil in the Leyden phial; and on transporting it to a second glass of cold mixture, the thermometer fell in five minutes to 36 degrees, where it remained stationary during the time it continued in the mixture. What was very remarkable in this experiment, the mercury in the thermometer was still fluid, although its bulb was frozen into that contained in the tube; for on reversing the instrument, the mercury ran out of the bulb into the stem. Now, here is a proof that mercury may be cooled $3\frac{1}{2}$ degrees below its freezing point without becoming solid.

Third experiment with native mercury.—It having been lately asserted, that a thermometer, filled with highly rectified spirits of wine, is better calculated to determine the freezing point of mercury, than one filled with the same metal, because it resists

BOOK.
XI.

congelation longer, I plunged the spirit thermometer into the tube containing the native mercury. Having placed the apparatus in the glass with the refrigerant mixture for five minutes, and transported it into a second glass, the spirit falling in the thermometer to 32, we examined the mercury, and found it frozen, although the spirits of wine remained fluid, and the thermometer stood at the same degree, not only while the apparatus remained in the cold mixture, but even after I transported it into a warm room, and kept at the same point, until a large part of the bulb of the thermometer was uncovered by the melting of the frozen mercury, drop by drop, into a glass.

Fourth experiment on common barometer mercury.—The mercurial thermometer used in the first experiment was plunged into this mercury, and placed in the glass of cold mixture, where, having remained about five minutes, it was transported into a second glass, and there in four minutes the thermometer sunk down to 38, and remained stationary. There the same singular phenomenon presented itself that appeared in the second experiment, with some additions; viz. that the mercury was cooled down to $5\frac{1}{2}$ degrees below its freezing point on this thermometer without becoming solid.

Fifth experiment with the same mercury.—I froze a little of this mercury without inserting a thermometer, in order to try its malleability and specific gravity; it flattened under the hammer, and of course is malleable, and sunk in fluid mercury, which shews that it contracts considerably in freezing, differing in this

circumstance from common ice, which expands and swims in water.

CHAP.
III.

Sixth experiment on mercury adulterated with tin.—The spirit of wine thermometer was plunged into this mercury, and stood at 32 when the mercury was frozen round its bulb.

Seventh experiment on purified mercury, was on the 10th of January, 1785 (a repetition of a former one) in the presence of professors Pallas and Ferber, and other gentlemen, who attended. I plunged the spirit thermometer into a portion of Mr. Winterberger's vivified mercury, and it fell to 32 degrees below O, whilst the mercury was freezing, and remained there after it became solid so long as it stood in the frigorific mixture. I then drew the thermometer out of the tube with its bulb froze into the mercury, and hung it on a nail in the open air; the metal melted slowly in drops, and the spirit still kept at the same point until the greatest part was thawed; we finished these experiments by trying with the spirit thermometer, what degree of cold was produced by a fresh frigorific mixture, which appeared to be just 35 degrees below O.

From the whole of these experiments, I am disposed to conclude, that the freezing point of mercury is at 32 degrees below O on Reaumur's thermometer, or 40 of Fahrenheit's, and that common mercury does not freeze with a less degree of cold than what has been purified.

Eighth experiment.—February 1, 1785, a favourable cold of 15 degrees offering this evening, and being provided with some

K k 2

revivified

BOOK
XI.

revivified mercury, twice distilled with fixed alkali by Mr. Winterberger, a preparation which has been said to resist a greater degree of cold than the others; but we found that it froze in $2\frac{1}{2}$ minutes exactly at 32 degrees of Reaumur's mercurial thermometer, in the first glass of cold mixture, and differed in nothing from all the other sorts excepting the following.

Ninth experiment.—Mercury purified with antimony froze in two different experiments at 30 degrees with a spirit thermometer, and in one with a mercurial thermometer at 32 degrees, so that there actually appears a disposition in this preparation to freeze with a less degree of cold than the others; but it must be remarked, that it has a blackish dull colour and sluggish motion.

Tenth Experiment.—Mr. Coxe being curious to try the malleability of the mercury distilled with alkali, which has a very bright and fluid appearance, I froze some of it in a tube, at the same time cooling the hammer in the refrigerant mixture, so as to acquire the same temperature as the frozen mercury, defending the iron from the action of the nitrous acid by means of a glass cylinder. This mercury bore several strokes of the cold hammer, flattening like a leaden bullet.

Eleventh experiment.—I lastly froze six drachms of common mercury, containing twelve times as much tin foil as in experiment the sixth; but even this quantity of alloy, which rendered it almost an amalgama, did not dispose it to freeze with less than 32 degrees of Reaumur.

February

February 16, O. S.—A cold of 24 degrees offering most unexpectedly this morning, so very late in the season, and another experiment having been suggested to me by an ingenious friend, Mr. Romme, to put the point of congelation of impure mercury still in a clearer light, I tried it about mid-day, when the cold was diminished 4 degrees in the shade.

Mr. Romme remarked, that mercury takes up much more bismuth than tin without losing its fluidity or colour, and as bismuth is a metal much oftener used to adulterate it, and very difficult to be separated from it, he thought therefore a mixture of them was a very proper subject of experiment to decide the question. I accordingly prepared an amalgama so thick, that it silvered glass like a mirror by merely running over it, and adhering so fast as not to be removed without scraping. But still the freezing point of this very impure mercury was the same as the others; viz. 32 degrees of Reaumur, by the mercurial thermometer. The spirit thermometer being employed to try the cold of the frigorific mixture, to my surprise fell no lower than the other thermometer inserted in the mercury contained as usual in a tube.

Thus ended my experiments this season; and I think I may venture to draw the following inference from them:

That the point of congelation of mercury is at 32 degrees below O on Reaumur.

That there appears no difference in the point of congelation of purified and common mercury, except one preparation with antimony

timony, which seems to congeal with a less degree of cold than all the others above-mentioned.

That in some circumstances mercury may be cooled below its freezing point without losing its fluidity, even as far as five and an half degrees, whilst the portion in which the bulb of the thermometer is plunged becomes solid.

That there appears nothing in these experiments to affect the credit of the mercurial thermometer, as an accurate instrument for measuring the degrees of heat from the point of boiling water down to that of the congelation of mercury; but that no conclusions can be drawn from its motions below this point, as they depend on the contraction of the metal in a solid state, which ought to be carefully distinguished from what takes place whilst it preserves its fluidity; that therefore the ideas we have formed of the cold obtaining in the habited countries near the poles, and the astonishing power of animals to resist it, must be erroneous *, as they have been taken from the extraordinary descent of the mercury in the thermometer, which, we now know, is derived from the contraction of the mercury when frozen, and not from such an extraordinary degree of cold, as, if it had taken place, must have destroyed the whole system of organized bodies.

* Dr. Blagden ingeniously infers from a comparison of natural cold, during a series of years, at Albany Fort, measured by a spirit thermometer, and of artificial cold produced by freezing mixtures, that the extreme of artificial cold produced by snow and nitrous acid cor-

responds pretty exactly with the extreme of natural cold in the most rigorous climates, which can well be inhabited; and does not exceed 46'' of a standard mercurial thermometer of Fahrenheit. Phil. Transac. vol. lxxiii. p. 387.

That

That we cannot, according to our present knowledge of the subject assert, that there exists a much greater degree of cold than the point of the congelation of mercury, no other instrument having been employed to ascertain it than the mercurial thermometer, which is now proved of no authority below 32 degrees of Reaumur.

But it appears, that a thermometer filled with highly rectified spirits of wine preserves its fluidity in a cold of 35 degrees of Reaumur, or 47 of Fahrenheit, and probably in a greater, so that it may be employed in northern climates with more advantage than one filled with mercury.

The surprising coincidence in the freezing of mercury congeled in Siberia by natural cold, with that effected by means of artificial cold, merits attention, as they both fix the freezing point of mercury at 32 of Reaumur; particularly professor Laxman, in a late paper to the Imperial Academy, declares, that he found common mercury constantly become solid at 210 of De Lisle (32 of Reaumur) and that in the year 1782, it continued solid for two months together; and Dr. Pallas, in the third volume of his Travels, mentions the same phenomenon taking place about the same part of the scale."

Thus far Dr. Guthrie.

From a careful review of Mr. Hutchins's experiments, and a comparison of the thermometers which he employed on that occasion, Mr. Cavendish * concludes, that the true point at which

* Philos. Transactions, vol. lxxiii. p. 2. page 321.

BOOK
XI.

quicksilver froze on Mr. Hutchins's thermometers, graduated according to the scale of Fahrenheit, was 40; and a thermometer adjusted in the manner recommended by the Committee of the Royal Society, freezes in $38\frac{2}{3}$, or in whole numbers 39 below freezing point, or $31\frac{2}{3}$ of Reaumur, which answers to the conclusion drawn by Dr. Guthrie from his experiments, estimating the point of mercurial congelation at 32 of Reaumur, or 40 below 0 of Fahrenheit.

As the degree of artificial cold requisite to congele quicksilver had been greatly misconceived and exaggerated, a similar misconception also prevailed with respect to the degree of natural cold necessary to the success of the experiment.

Professor Braun estimated, that the degree of natural cold ought not to be less than 190 of De Lisle, or 17 below 0 of Fahrenheit, and that opinion was generally adopted by the naturalists of Russia, as when the mercury in the thermometer stood above that point, they conceived it needless to attempt the experiment.

Dr. Guthrie, however, in the course of his experiments sufficiently proves, that the congelation succeeded in a cold not exceeding 0 of Fahrenheit, and subsequent experiments made at Oxford by Mr. Walker shew, that a very small degree of natural cold is sufficient to obtain for the frigorific mixture the degree of cold necessary to congele quicksilver.

Mr. Walker congeled quicksilver by means of a mixture of, equal parts, of vitriolic acid and strong fuming nitrous acid with snow,

now, the temperature of the atmosphere being only at 30, or 2 degrees below freezing point.

CHAP.
III.

The same ingenious gentleman has also shewn, that it may be even frozen in summer, in the hottest climates, by a particular combination of the frigorific mixtures, without the use of ice *.

I shall close this chapter with several curious experiments made in Siberia by Dr. Pallas, for the purpose of ascertaining the difference of the heat in animals during their torpid and natural states.

Dr. Pallas having made an incision into the abdomen of a hedge-hog during its torpid state, and placed Fahrenheit's thermometer in its belly, the mercury rose only to $39\frac{1}{2}$; and the animal gave no more signs of feeling, than if it had been actually dead, as well whilst he was making the incision, as when he was sewing up the wound, although the animal was immediately afterwards put into a warm room, gradually recovered from its lethargy, and walked about the chamber with as much insensibility as if no operation had been performed.

The doctor kept this hedge-hog in his house from December to the end of March; and although the heat of the apartment in which it lay was seldom under 60 degrees, yet it eat no food, and was never out of its torpid state, except once or twice, when it was placed behind the stove, in a heat from 77 to 80. Roused

* Walker's Experiments on the Production of Artificial Cold, Phil. Tran. vol. lxxviii. p. 395.—Also Walker's Experiments on the Congelation of Quick-silver in England, Philos. Transactions for 1789, vol. lxxix. part II. p. 199.

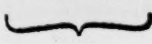
by that expedient, it was awakened from its lethargy, took a few turns about the room, and eat a few morsels; but soon lay down again, and passed its torpid months as nature ordains.

It is probable, that the bodies of these animals, who sleep during winter, are gradually prepared for the torpid state by a deficiency of food, and a consequent diminution of natural heat; for, a thermometer plunged in the bellies of marmots and hedge-hogs in their natural states, rose to 76, 79, 81, 86, 88, 99, and 99½, namely, from 36½ degrees to 50 higher than it rose when plunged into the belly of the hedge-hog in its torpid state.

The following fact also seems still further to illustrate the conjecture, that a certain state of body predisposes to a torpid state. A tame marmot, which had become extremely fat during summer in the professor's house, continued awake during the whole winter, although it was exposed to the same cold which threw the whole species into their torpid state in that part of Siberia; nor was the doctor able to render it torpid, even with the assistance of the ice-cellar, wherein he sometimes confined it during several days.

By comparing this experiment with the sleeping hedge-hog, which Dr. Pallas was not able to rouse from its lethargy during the whole winter, except for very short intervals, though exposed to a heat of between 77 and 80 degrees; it seems to follow, that a certain state of body is necessary to assist nature in laying asleep some animals, to which they are gradually brought by a deficiency of nourishment about the beginning of winter, when

when they shut up their holes, and retire to rest from instinct; and that the impulse of the circulation and animal spirits, arising from heat or full feeding, supersedes the necessity of the torpid state, and prevents their falling asleep.

CHAP.
III.


It is also a curious circumstance in the œconomy of nature, that Dr. Pallas found the heat of birds more considerable than that of quadrupedes; namely, from 103 to 111 degrees; a wise arrangement of providence in proportioning the heat of the winged tribe to the superior cold obtaining in that part of the atmosphere where they range.

C H A P. IV.

*Journey from Petersburgh to Riga—History of Livonia—Narva—
Dorpt—Riga—Anecdotes of General Brown.*

BOOK
XI.

MAY 8, 1785. On quitting St. Petersburgh, we pursued our journey through part of Ingria, Esthonia, and Livonia, provinces conquered from the Swedes by Peter the Great. As the ground was in many parts covered with snow, and as we travelled night and day, we could not sufficiently observe the productions of the country; and as the incidents of the journey were in no wise remarkable, I shall chiefly confine my account to the history of Esthonia and Livonia, and to a short description of Narva, Dorpt, and Riga, the only places through which we passed, in any degree worthy of notice.

As Esthonia and Livonia, bordering upon Russia, Sweden, and Poland, and reciprocally claimed and possessed by those three powers, were, during a period of more than two centuries, a constant source and a perpetual scene of the most bloody wars, it may not be unnecessary to state briefly their history, and to trace the causes which rendered them objects of such contention to those three powers.

In 1158, some merchants of Bremen, bound to Wisby, in the

isle of Gothland *, being drove by strefs of weather, landed at the mouth of the Duna, and trafficked with the natives. Drawing considerable advantage from this trade, the merchants returned in great numbers, and gradually established a settlement. A German monk of the Augustine order, who accompanied the new colonists, acquired the language of the country, converted several of the natives to Christianity, and persuaded them to be baptized.

According to the custom of that barbarous era, an order of knighthood, first called the Knights of Christ, and afterwards with more propriety the Knights of the Sword, was instituted for the propagation of Christianity by fire and sword. Those military missionaries, equally fanatic and sanguinary, gradually overran the country, and reducing the antient inhabitants, rendered them at the same time Christians and slaves.

In 1231, these knights, being incorporated in the Teutonic order, stiled themselves Knights and Lords of the Cross, and purchased Esthonia, in 1521, from the king of Denmark. Walter Plettenberg their chief, or general of the order, having obtained from the grand master of the Teutonic order the chief jurisdiction of Livonia, was considered as independent, and admitted soon afterwards by Charles the Fifth among the princes of the empire.

The knights continued in possession of Esthonia and Livonia, until the weakness and impolitic conduct of their masters, and

* Nachrichten von Liefland, S. R. G. v. 9. p. 263.

civil dissensions, incited the ambition of the neighbouring powers, and involved the country in a series of bloody wars.

In 1556, the archbishop of Riga being imprisoned by Walter Furstenberg, the general of the order, implored the assistance of his uncle Sigismund Augustus king of Poland. Sigismund immediately armed in favour of his nephew, invaded Livonia, and compelled Walter Furstenberg not only to restore the archbishop to liberty, but to conclude a treaty, by which he acknowledged himself and the province of Livonia dependent on the crown of Poland.

But Ivan Vassilievitch, whose ancestors had formerly possessed Dorpt, and other towns in Livonia and Esthonia, laid claim to these provinces, and entering Livonia with a formidable army, resolved to annex them to the Russian empire.

In this imminent danger, the city of Revel, and the inhabitants of Esthonia, threw themselves under the protection of the king of Sweden, who, in taking possession of that province, claimed Livonia as an annexed dependency. At the same time the Russians, entering Livonia, met with little resistance, took Furstenberg, the grand master, prisoner, and overran the greatest part of the country, in 1559.

Gothard Ketler, who was appointed grand master in the place of Furstenberg, finding it impossible to resist the Russian arms, hastily concluded a treaty with Sigismund Augustus, ceded Livonia to the crown of Poland, on condition of reserving to himself and heirs male the duchies of Courland and Semigallia as

fiefs of Poland. At the conclusion of this treaty, Livonia, the object of contention, thus ceded to Poland, was partly possessed by the Poles, partly by the Swedes, and partly overrun by the Russian arms.

In this situation of affairs, Ivan Vassilievitch conferred on Magnus prince of Denmark, who, in the capacity of bishop of Pilten in Courland, had some pretensions to Livonia, the nominal sovereignty of that province. Having already related * the account of that transaction, together with the erection and extinction of the short-lived kingdom of Livonia, I shall only add, that Ivan Vassilievitch, being worsted by Stephen Bathori, king of Poland, in several engagements, was glad to purchase a peace, by ceding, in 1582, to the crown of Poland, all that part of Livonia which he had occupied: but the king of Sweden continued in possession of Esthonia; and, by the fourth article of the peace of Oliva, obtained possession of all Livonia. These important provinces of Livonia and Esthonia containing all the north district between the gulf of Finland, the Narova, the Peipus lake, and the Duna, and stretching to the boundaries of the present government of Polotsk, were wrested from the Swedes by Peter the Great, and confirmed to the Russians by the peace of Ryftadt, in 1721.

The reformation was first introduced into Livonia and Esthonia in 1522, and was soon embraced by all ranks of people. The Lutheran religion is the most prevalent; but all other sects are tolerated.

* Book III. Ch. vi.

BOOK
XI.

Narva and its suburbs, according to a geographical division, are situated partly in Ingria, and partly in Esthonia, as the river Narova divides those two provinces; but in the division of governments established by the present empress, it is comprised in Ingria, or the government of St. Petersburg.

Narva is near 100 miles from Petersburg, and stands on the Narova, 24 miles from the point where that river issues from the lake Peipus, and eight miles from its mouth, where it falls into the gulf of Finland. The houses are built of brick stuccoed white, and it has more the appearance of a German than of a Russian town.

In the suburbs, called Ivangorod, or John's Town, the colossal remains of an ancient fortress, built by Ivan Vassilievitch the Great, impend in a picturesque manner over the steep banks of the Narova.

The principal exports from Narva are hemp, flax, timber, and corn; the imports, salt, tobacco, wine, salted herrings, spices, tea, sugar, and other grocery wares.

I did not omit visiting the two falls of the river Narova, which have been too pompously described by several travellers, and which must appear trifling and uninteresting to any one who has seen the fall of the Rhine at Schaffhausen, of the Dahl, near Gefle, in Sweden, and the stupendous cataracts of Trollhætta.

The breadth of the river is about 200 feet, and the perpendicular

cular height of the falls scarcely exceeds twenty feet. The steep and chalky banks of the river, its rapid and turbid stream, and a rocky island which separates the two falls, form a rugged and picturesque scenery, which is heightened by the foam and roaring of the cataract.

Near Narva is the spot celebrated for the victory which Charles the Twelfth, in the nineteenth year of his age, gained over the Russian army in 1700. Authors prone to exaggeration, and willing to render more marvellous the exploits of the Swedish hero, have diminished the Swedish army to 3,000, and increased the Russians to 100,000. The fact seems to be, that Charles headed, on that memorable day, at least 9,000 men, and that the Russians did not exceed 32,000 *. And it is no wonder that the veteran troops of Sweden, led on by their undaunted monarch, should triumph over a raw undisciplined army, commanded by generals at variance with each other. Six thousand Russians, including those who were drowned in attempting to pass the Narova, fell in this engagement; but the consequences were still more fatal to the Russian arms, as the whole artillery was lost, and the greatest part of the infantry surrendered to the conqueror. The number of prisoners was so great, that the officers were only detained; the rest, being disarmed and dismissed, were driven along like a flock of sheep to the distance of a league from Narva.

Peter the Great, instead of being dispirited with this loss, ex-

* See L'Evesque's Hist. de Russie, vol. iv. p. 169.

BOOK
XI.

claimed, "I expected that the Swedes would beat my troops; but in time they will teach us to conquer them." Nor was this prediction long before it was verified. In less than five years from the defeat at Narva, he revenged the dishonour of his arms on that unfortunate day, by taking that town by assault; and gave the following singular proof of his humanity.

The Russian soldiers were beginning to pillage, and to commit all the disorders usual when a town is taken by storm. Peter traversed the streets on horseback, with his drawn sword in his hand, restrained his troops from pillage, killed two who refused to desist, placed guards at the doors of the principal houses and before the churches, and repaired to the Hotel de Ville, where the magistrates and principal citizens had taken refuge, and throwing his sword upon the table, exclaimed, "It is not stained with the blood of the natives, but with that of my own soldiers, whom I killed in order to save your lives *."

Dorpt, 174 versts, or 116 miles, from Narva, still bears evident marks of the dreadful devastation which it suffered in the wars between the Swedes and Russians in the beginning of this century; and particularly in the ruins of its cathedral, which form a picturesque object on an adjacent hill. In addition to these devastations, the town suffered a few years ago from a violent conflagration; but it is now rebuilding, and will rise more beautiful from its ruins, as the empress has contributed with her usual munificence. A wooden bridge over the Empack was likewise

* L'Evesque, p. 201.

burnt

burnt down, but has been supplied by a magnificent stone bridge, on which I remarked, and noted down, the following arrogant inscription :

CHAP.
IV.

* Siste impetus hic flumen,
Catharina II. jubet;
Cujus munificentia hæc moles
In publicum commodum
Exstructa, Livoniaque primo
Lapideo ponte adornata.

1783.

In pursuing our route from Narva to Dorpt, we coasted the lake Peipus, a large but uninteresting piece of water, the banks flat, and the environs mostly sandy.

Dorpt stands in the midst of the most fertile part of Livonia, which has been called, from the abundance of grain it produces, the Granary of the North; and this fertile district continued till we came within a few miles of Riga, which is invested, as Mr. Wraxall justly observes, "on every side with deep barren sands. Its situation in so barren a spot was chosen by commerce, the genius of which still protects and enriches it †."

Riga, the capital of Livonia, contains within the fortifications 9,000 inhabitants, and in the suburbs 15,000, exclusive of a garrison of 1,000 soldiers. It derives its consequence from its

* Here, O river, stop your impetuous course, Catharine the Second commands; raised, and Livonia adorned with this first stone bridge.

by whose munificence this mound was † Wraxall's Northern Tour, p. 281.

BOOK
XI.

situation on the Duna, a river which, being navigable from the frontiers of the government of Polotsk, brings the productions of the north-eastern parts of Poland, and the western provinces of Russia, and is sufficiently deep to receive, close to its walls, ships of burthen, which sail to and from the Baltic.

Next to St. Petersburg it is the most commercial town in the whole Russian empire. The trade is chiefly carried on by foreign merchants, who are resident in the town. The merchants of an English factory established there enjoy the greatest share of the commerce, and live in a very hospitable and splendid manner. The principal exports are corn, hemp, flax, iron, timber, masts, leather, tallow, &c.; its principal imports are salt, cloth, silks, wine, grocery wares, and salted herrings.

The mast trade, so beneficial to this town, is carried on in the following manner: The burghers of Riga send persons, who are called mast-brokers, into the Russian provinces, in order to mark the trees which are fit for the purpose. The proprietors of the lands sell them standing. They grow mostly on the districts which border on the Dnieper, and are sent up that river to a landing place, and transported about thirty versts to the Duna. They are then formed into floats of from 50 to 200 pieces, and descend the stream to Riga. The tree which produces the largest masts is the Scotch fir. Those pieces which are from 18 to 25 inches in diameter are called masts; under those dimensions, spars, or, in England, Norway masts; because Norway exports no trees more than 18 inches in diameter.

The

The English merchants, who contract with government, buy these masts from the burghers of Riga; and great skill is required in distinguishing those that are found throughout from those which are in the least internally decayed. They are usually from 70 to 80 feet in length.

The hemp is brought from the Ukraine and Poland, and employs two years in its passage to Riga. The barks in which it is conveyed, are from 250 to 300 tons burthen; are covered with matting, sloping like a penthouse roof, and have a false bottom. They ascend the Dnieper and the Duna; but can only pass the last-mentioned river in the spring, or about three weeks after the snow begins to melt, on account of the numerous shoals; so that if they miss that time, they are delayed till autumn.

The hemp exported from Riga is generally more esteemed, and 30 per cent. dearer than that which is exported from Peterburgh*; the former comes from the Ukraine, the provinces of Mohilef and Polotfk, and the neighbouring parts of Poland; the other from the governments of Tver and Novogorod.

The Riga hemp is chiefly used for shrouds and stays of men of war; and procured by contract for the English admiralty and East India company.

In case of necessity, the *Urtica Cannabina*, or the hemp-nettle, might be substituted in the place of hemp. It is a native of south-eastern Siberia, on the other side of the Oby, and is chiefly found in the vallies, between rocky mountains, and on the banks

* Lately the Ukraine hemp has found its way to Peterburgh.

BOOK
XI.

of rivers. It comes out early in the spring, and affords good shoots, which are eaten by the natives as vegetables. It flowers in June or July; and in good soils shoots from ten to fifteen feet high. In Siberia the seeds ripen in September, about the time of the first frost. It is perennial, and multiplies by running. The cords made from this species are stronger even than those twisted from hemp. The Mongol Tartars use them for the cords to their bows, and for nets to catch animals in the woods. In some parts of Germany the natives employ them for ropes. This plant is described in Amman's *Stirpium Rariorum in Imperio Rutheno Icones et Descriptiones*, p. 173. N° 249. plate 25. *Urtica foliis profunde laciniatis*; also in Gmelin's *Flora Siberica*. It will be described in the third volume of Pallas' *Flora Ruffica*.

The common nettle, the *urtica urens* of Linnæus, supplies the natives of Kamtschatka *, and of the Kuril Isles, with cords for their fishing nets.

The inhabitants of Riga carry on also a considerable commerce in salt. They import it from Spain, and send it up the Duna to supply the districts bordering on that river; and by land into Courland, and the neighbouring provinces of Poland.

We paid our respects to General Brown, the governor of Riga, and had the honour of dining with that gallant veteran, who, with a pleasing garrulity natural to old age, related a variety of interesting adventures that had befallen him in the course of a long and active life. He is a native of Ireland, and was born

* See Cook's last voyage, vol. iii. p. 339.—Pallas Nord. Beytr. vol. iv. p. 117.

in the beginning of this century. Being a Roman catholic, he was compelled to seek his fortune in foreign courts, which he would willingly have dedicated to his own. He first entered the Austrian, and finally into the Russian service. He served under Count Munich against the Turks, in the campaigns of 1737, and 1738, and distinguished himself at the siege of Otchakof. Being sent with a corps of troops into Hungary, he was taken prisoner by the Turks, sold as a slave, and transferred to four different masters. At one time he was bound back to back with another prisoner for eight-and-forty hours, and exposed almost naked at the various places where slaves are brought for sale. He had then borne the rank of colonel in the Russian service, but gave out, that he was only a captain, in order to lessen the price of his ransom. Having been accidentally met by a gentleman, to whom he was personally known, he sent information of his situation to the French ambassador, who found means to purchase him for 300 ducats. But his Turkish master discovering that he was of higher rank than he had pretended, reclaimed his prisoner, and threatened to use force in order to recover him. The French ambassador, however, applied to the Grand Vizir, who decided in his favour: Count Brown recovered his liberty, and returned to Russia, in which service he was gradually promoted, and has been lately appointed governor of Riga, a place of the greatest trust.

The bridge over the Duna, at Riga, is a floating wooden bridge, 40 feet in breadth, and 2,600 in length, and is formed in the following

lowing manner: A row of piles is driven in, extending from one shore to the other; each pile is from 25 to 40 feet long, according to the depth of the river, and appears about four feet above the level of the water. To these piles the several parts of the bridge are loosely fastened, by means of iron chains fixed to the transverse beams. The bridge rises and falls with the river; and when heavy laden carriages pass over it, plays under the wheels as if actuated by a spring. This bridge is the fashionable walk, and is an agreeable busy scene, when crowded with people, and lined on each side with ships taking in or unloading their cargoes. In the beginning of winter, when the frost sets in, the bridge is taken to pieces, and removed; the piles remaining in the water, are forced up by the ice, and conveyed to land: the whole is again laid down, on the melting of the ice, in the spring.

The importance of the trade of Riga will appear from the following tables:

LIST

LIST of the Number of Vessels arrived at RIGA, 1782
and 1783.CHAP.
IV.

	1782.	1783.
Danish - - - - -	125	145
French - - - - -	—	8
From St. Petersburg - - - - -	43	38
English - - - - -	94	200
Dutch - - - - -	6	122
Swedish - - - - -	298	422
Prussian - - - - -	153	123
From Ostend - - - - -	123	66
Portuguese - - - - -	7	7
American - - - - -	—	1
From Bremen - - - - -	16	34
Dantzic - - - - -	5	10
Lubec - - - - -	29	26
Rostoc - - - - -	23	3
Hamburgh - - - - -	5	5
Pernau - - - - -	4	6
From Riga - - - - -	30	38
Total -	961	1,254

BOOK
XI.LIST of the Number of Vessels which arrived and failed from
RIGA, in 1784; specifying those which wintered there.

	Wintered.	Arrived.	Departed.
Danish - - - - -	—	160	160
French - - - - -	—	10	10
From St. Petersburg - - -	14	32	36
English - - - - -	3	175	174
Portuguese - - - - -	—	4	4
Prussian - - - - -	2	77	77
Swedish - - - - -	4	311	311
Dutch - - - - -	—	170	170
From Ostend - - - - -	—	33	33
Genoa - - - - -	—	1	1
Hamburgh - - - - -	—	12	12
Lubec - - - - -	4	27	27
Bremen - - - - -	1	25	24
Dantzic - - - - -	—	3	3
Rostoc - - - - -	—	11	11
Pernau and Revel - - -	—	4	4
Riga - - - - -	15	30	20
Total -	43	1,085	1,077

VALUE

VALUE of the Cargoes of the vessels which sailed from RIGA,
in 1784.

CHAP.
IV.

				Roubles.	Copecs.	
For Denmark	-	-	-	735,335	78	—
France	-	-	-	270,886	68	—
the Dominions of the Emperor-	-	-	-	51,209	45	—
England	-	-	-	1,288,284	58	—
Spain	-	-	-	388,843	1	—
Portugal	-	-	-	302,213	93	—
Prussia	-	-	-	64,775	75	—
Sweden	-	-	-	1,182,907	79	—
Holland	-	-	-	1,470,320	93	—
Italy	-	-	-	135,097	8	—
Hamburgh and Bremen	-	-	-	209,840	7	—
the Baltic	-	-	-	292,707	39	—
Total of Exports	-	-	*	6,392,422	44	—
Value of the Imports	-	-	†	1,422,717	87	12
Excess of Exports	-	-	‡	4,969,704	56	12

* In English money, if we estimate a
pound sterling at six roubles, £.1,065,403,
omitting the fractions.

† £.237,119.
‡ £.828,284.

BOOK
XI.

COIN IMPORTED.

						Value in Roubles.	
Ducats	448,793	-	-	-	-	1,207,741	10
New rix-dollars	1,780,744 $\frac{1}{4}$	-	-	-	-	2,368,389	85 $\frac{1}{4}$
Old rix-dollars	138,976 $\frac{1}{4}$	-	-	-	-	1,182,058	84 $\frac{1}{4}$
Sum total of coin imported						- * 4,758,189	79 $\frac{1}{2}$

* £.793,031.

C H A P. V.

*Mittau—Dutchy of Courland—History—Succession—Anecdotes of
Ernest John Biron—Constitution—Feodal Dependence on Poland
—Rights of the King of Poland—Prerogatives of the Duke—
Diet—Nobles—Religion—Language.*

ON quitting Riga we crossed the Duna, passed through a flat sandy country, thinly inhabited, to the Russian frontiers, about sixteen English miles distant from Riga, and entered the dutchy of Courland. Our baggage was most strictly examined by a Russian custom-house officer, who even opened our portfolios, and examined the smallest pieces of paper. This strict search is made for the purpose of preventing foreigners from carrying out of Russia the current coin; an useless precaution, it should seem, considering the debased state of the coinage.

Mittau, sixteen miles from the frontiers of Livonia, stands in the midst of a very fertile and agreeable country; is a long town, containing a mixture of brick houses, stuccoed white, and wooden buildings. It contains little remarkable but the palace and the academy.

CHAP.
V.

The

The palace, built by the late duke, is a great pile of buildings, containing a large and a handsome suite of apartments, but almost totally without furniture. It is so magnificent, and upon so large a scale, for so little a sovereignty, as almost to justify the witticism of a traveller, who affirmed that the palace was larger than the dukedom, estimating the country not from its size, but from its trivial consequence in the scale of the north.

The academy, instituted by the present duke at a considerable expence, contained, in May 1785, almost as many professors as students, there being eight professors, and only twenty students.

The dutchy of Courland and Semigallia is bounded on the north by the Baltic, on the east by Livonia, and by Poland on the south and west. It stretches in length 250 English miles, and its average breadth may be estimated at about 40 miles.

In the last chapter I have already observed, that Gothard Ketler, grand-master of the Livonian knights, in consideration of ceding Livonia to Poland, was to be invested with the dutchy of Courland and Semigallia. At Wilna, where this treaty was concluded, in 1561, Gothard Ketler, and the principal knights, quitting the habit and ensigns of the order, he received the investiture of his new dukedom as an hereditary fief to be held of the crown of Poland, and did homage for the same.

Gothard dying in 1587, was succeeded by his son Frederic; and, in 1589, it was enacted by the diet of Poland, that if this fief

should be vacated by the extinction of the heirs male of the line of Ketler, Courland and Semigallia should be united to Poland. But the republic of Poland was not sufficiently powerful to enforce this edict when that event took place.

Frederic William, duke of Courland, dying, in 1711, without issue, the right of succession devolved on his great uncle Ferdinand, the only surviving branch of the Ketler line; but Peter the Great, who had overran Courland with his army, took possession of Mittau and great part of Courland, under the pretence of securing the dowry for his niece Anne, widow of Frederic William. Ferdinand, who was absent from Courland, and at variance with his nobility, was unable to enforce his right; and Courland was, during the space of several years, governed by the Russian court, under the name of the Dutchess Anne. The country was in a state of civil confusion, and several ineffectual attempts were made to raise, first, a prince of the house of Saxony, and afterwards, Frederic William, Margrave of Schvedt, to the ducal throne.

At length, in 1726, the infirmities and absence of Ferdinand giving a pretext, the opposite party of nobles determined to appoint a successor; and Augustus the Second, king of Poland, secretly influenced the diet of Courland to nominate his own natural son Maurice, afterwards so well known under the title of Marshal Saxe. This appointment was contested by the republic of Poland, and by Catharine empress of Russia.

The

The Polish diet, which assembled at Grodno, denied the right of the nobles of Courland to appoint a duke, declared that dutchy a vacant fief belonging to the republic of Poland, annulled the election of the Count of Saxe, and proposed, on the death of Ferdinand, to incorporate the dutchies of Courland and Semigallia to the crown of Poland, according to the edict of the Polish diet passed in 1589.

Catharine, who considered Courland almost as a province of the Russian empire, and anxious to appoint a duke of her own nomination, equally opposed the election of Maurice, and the incorporation of Courland to the crown of Poland; and prince Mentchikof, who, on the death of Catharine, aspired to the ducal throne, dispatched a corps of Russian troops to Mittau, and drove Maurice from Courland. The fall of Mentchikof prevented his nomination; but the Russians, first under Peter the Second, and afterwards under Anne, maintained their troops and influence in Courland, and promised to support the states in their right to elect a sovereign on the decease of Ferdinand the reigning duke.

The death of Augustus the Second, in 1733, annihilated the hopes of Maurice; and, on the death of Ferdinand, in 1737, the empress Anne forced the states of Courland to elect her favourite, Ernest John Biron, and supported his election in opposition to the claims and remonstrances of Poland.

At

At length, deputies from the empress and the new duke of Courland on one side, and from the king and republic of Poland on the other, regulated the convention between the kingdom of Poland and the duke of Courland. This convention, called *Pacta Subjectionis*, or Acts of Vassalage, settled the feudal rights of the king and republic of Poland, regulated the constitution of Courland according to the former conventions or acts of vassalage agreed to by the preceding dukes, and established the succession to the duchy of Courland in the male line of Ernest John Biron.

In 1739, the chancellor of Courland did homage in the name of the duke to Augustus the Third, king of Poland. But, in 1740, Biron being arrested and imprisoned by order of the princess Anne, regent of Russia, under her infant son Ivan, the states of Courland declared the ducal throne vacant, and elected, at the recommendation of the regent Anne, Louis Ernest, prince of Brunswick, and brother of her husband Anthony Ulric; the same person who was afterwards governor to the stadtholder of the United Provinces, and generalissimo of the Dutch forces, until he was driven from Holland by the French, or, as they styled themselves, the patriot party.

The revolution of 1741, which dethroned Ivan and placed Elizabeth on the throne of Russia, prevented the ratification of this election; and from that period, till 1759, the administration was nominally vested in the council of state; but the whole power centered in the court of Russia.

BOOK
XI.

In 1758, the nobles of Courland, disgusted with their rulers, declared the ducal throne vacant, and elected Charles Christian, third son of Augustus the Third. Charles received, in 1759, the investiture of the two dutchies from the king of Poland, made his entry into Mittau the same year, and repairing to Peterburgh, obtained from the empress Elizabeth the restitution of the ducal estates and revenues which had been sequestered by Russia, and her renunciation of all right and title to those two dutchies.

But the death of Elizabeth, in 1761, rendered this restitution ineffectual. Peter the Third recalled Biron from exile; and Catharine the Second had scarcely ascended the throne, by the deposition of Peter, before she restored Biron to his former dignity.

I shall close this hasty sketch of the succession to the duchy of Courland with some biographical anecdotes of that celebrated personage.

Ernest John Biron * was descended from a family of mean extraction. His grand-father, whose name was Buren, or Bieren, was head groom to James the Third, duke of Courland, and ob-

* For this account of Biron I have consulted Manstein's Memoirs, p. 42, 47, 62, 190, 263, 265, 268, 280; Letters from a Lady in Russia, Let. xxviii. xxix; Schmidt's Materialien fuer den Russ. Gesch. p. 38, 44, 281, 321; Motifs de la Disgrace D'Ernest Jean de Biron, duc de Courland, written by himself, in Burching's Hist. Magazin. vol. ix. p. 383, 398; Antwort auf die Vergehende Schrift. von einem naechsten Verwandten des Grafen von Munich, ibid. p. 401, 414; Government de l'Empire de Russie, by Marshal Munich, passim.

tained from his master the present of a small estate in land. His son accompanied prince Alexander, youngest son of the duke of Courland, in a campaign into Hungary against the Turks, in quality of groom of his horse, and with the rank of lieutenant. Prince Alexander being killed before Buda, in 1686, Biron returned into Courland, and was appointed master-huntsman to the duke.

CHAP.
V.

Ernest John, his second son, was born in 1687, received the early part of his education in Courland, and was sent to the university of Königsbergh in Prussia, where he continued until some youthful imprudences compelled him to retire.

In 1714, he made his appearance at St. Petersburg, and solicited the place of page to the princess Charlotte, wife of the tzarovitch Alexey; but being contemptuously rejected as a person of mean extraction, retired to Mittau, and chanced to ingratiate himself with Count Bestuchef, master of the household to Anne, widow of Frederic William duke of Courland, who resided at Mittau. Having through his means obtained the office of gentleman of the chamber, and being of a handsome figure and polite address, he soon gained the good-will of the dutchess, and became her chief favourite. The first use which he made of his favour, was to obtain the disgrace and removal of his benefactor Bestuchef. He soon gained such an entire ascendancy over the affections of his mistress, that his will became her's; and the upstart favourite offended by his arrogance the whole body of the nobility of Courland.

Having espoused Mademoiselle de Trenden, a lady of noble family, and maid of honour to the dutchess, he endeavoured, by means of that alliance, and the favour of his mistress, to be admitted into the body of nobles; but his solicitations were rejected with great contempt.

His ascendancy over the duchess, his spirit of intrigue, and his extreme arrogance, were so notorious, that when Anne was declared sovereign of Russia, one of the articles proposed to her by the council of state at Moscow, expressly stipulated, that she should not bring Biron into Russia. She consented, but instantly broke her word; for she had scarcely arrived at Moscow, before he made his appearance at her court.

By his secret advice, the empress formed a strong party among the Russian nobility, gained the guards, and brought about the revolution, which restored to the crown despotic authority.

But when the whole plan was ripe for execution, Anne hesitated, and was alarmed, till Biron took her by the hand, and led her to the door of the apartment in which the council of state, senate, and principal nobility were assembled; and she was declared absolute sovereign.

Within the space of a few months, Biron was appointed gentleman of the bed-chamber, knight of the order of St. Andrew, and lord high chamberlain, and, as Manstein says, was omnipotent in the government; for, during the whole reign of Anne, and some weeks after her death, he ruled with despotic sway the vast empire of Russia.

On

On the death of Ferdinand Ketler, in 1737, the empress dispatched general Bismarck, governor of Riga, to Mittau, at the head of a considerable army. The nobles having assembled in the cathedral, Bismarck surrounded the church with troops, and compelled them to elect for their sovereign the same Biron whom they had refused to admit into their corps. But his new dignity did not prevent him from keeping his post of high chamberlain, and his wife that of first lady of the bed-chamber.

Biron governed Courland with the same despotic spirit with which he governed Russia; and the nobles, who had been accustomed to great freedom of debate in their diets, were suddenly restrained. Those who ventured to oppose his will, or to speak with their usual freedom, were privately seized by persons in masks, forced into kibitkas, and conveyed to Siberia*.

Of a violent and sanguinary temper, Biron ruled Russia with the knout in his hand, and compelled his imperial mistress, who was naturally of a mild and merciful disposition, to order acts of the most atrocious cruelty, though she oftentimes interceded, but in vain, with tears in her eyes, for the unhappy victims of his suspicion and vengeance.

The cruelties exercised upon the most illustrious persons of the country almost exceed belief; and Manstein conjectures, that "during the ten years in which Biron's power continued, above 20,000 persons were sent to Siberia, of whom scarcely 5,000 were ever more heard of."

* Manstein, p. 196.

BOOK
XI.

The violence of his temper would break forth in a manner most disrespectful to the empress. Once in particular, while the duke of Bevern had an audience, Biron burst into the apartment without ceremony, threatening, with the most horrid imprecations, that he would no longer be vexed and tormented by her servants, but would retire into Courland. Having uttered these words, he quitted the room, and shut the door with great violence. The empress, in the highest consternation, lifted up her hands to heaven, then clasped them together, and being almost ready to faint, she opened the window for fresh air. While she continued in this agitation, the dutchess of Courland, accompanied with her children, entered the room, kneeled down, and entreated the empress to forget and forgive the passionate behaviour of her husband. Anne in this, as in every other instance, relented, and bore with his insolence *.

His influence over his imperial mistress was such, that during the sitting of the cabinet council, she used frequently to repair to an adjoining room, in which her favourite remained, to receive his advice, or rather his orders. She had no table of her own, but used to dine with his family.

He knew only two languages, the German, and his native jargon spoken in Courland; so that he governed the extensive empire of Russia without even understanding its language. He even

* Busching's Wochentliche Nachrichten, 1774, p. 316.

piqued himself on his ignorance of that tongue, having once said in the presence of the empress Anne, that he would not learn the Russian, because he could not bear to read before her majesty all the reports and memorials which were daily transmitted to him.

CHAP.
V.

Biron was undoubtedly a man of very great capacity; during his whole administration, the external splendour of the Russian empire, and its internal tranquillity, announced the wisdom of his measures; and he shewed his judgment in employing such a statesman as Osterman, and such a general as Munich.

He was a sincere friend and an implacable enemy; and it was justly said of him, that he seldom forgot a benefit, and always remembered an injury.

He amassed an enormous fortune in money and jewels; and on public occasions his magnificence * far exceeded the magnificence of the empress.

He had so long directed the affairs of a great empire, that he

* In his visit of ceremony to the Marquis de la Chetardie, the French ambassador, he was preceded by the following procession:

1. An officer of his court on horseback.
2. Two servants on horseback.
3. Three carriages drawn by six horses, containing six cavaliers.
4. Twenty-four servants on horseback.

5. Six running footmen.
6. Two blacks.
7. Thirty lacquies on foot.
8. Twelve pages.
9. Nine heydues.
10. His master of the horse.

Lastly, The duke himself in a splendid carriage drawn by six horses; behind, two servants in Turkish dresses.

could

BOOK
XI.

could not brook retiring into Courland. He accordingly prevailed upon the empress, on her death-bed, to appoint her great nephew, prince Ivan, her successor, and himself regent, until the prince had attained the age of seventeen; and he managed this whole transaction with so much art, that he seemed only to accept the regency at the earnest request and recommendation of Marshal Munich, the Chancellor Osterman, and the principal Russian nobility, as it were for the good of the empire, and not to satisfy his own ambition.

Having thus secured the regency, to the exclusion of Anne, the mother of the young emperor, the first act of his power in that capacity, was to obtain for himself a clear revenue of 500,000 * roubles per annum, and the title of Imperial Highness.

But the power which he had thus acquired by intrigue, he attempted to secure by repeated acts of arrogance, persecution, and cruelty. Piquets were placed in the streets to prevent commotions. The numerous spies which he entertained brought him vague accounts of contemptuous expressions, and ill-formed plots. Such numbers were arrested, that scarcely a day passed in which persons suspected were not imprisoned and tortured in order to force confession. But instead of disarming the envy and jealousy of the natives, who were disaffected at being governed by a foreigner, he increased his own unpopularity by the haugh-

* £. 100,000, according to the value of a rouble of that period.

tiness of his demeanour, and treated even the parents of his sovereign with the most extreme brutality.

It was natural that prince Anthony Ulric and the princess Anne, the father and mother of the infant emperor, should be disaffected at being set aside, and a foreigner preferred to the regency; and Anthony Ulric, who was a prince of great spirit, even expressed his disapprobation in the strongest terms to the regent himself.

The duke of Courland, suspecting that the prince was forming cabals against his government, called on him early one morning unexpectedly, and without being announced; "your highness," he said, "does not deal fairly with me; for you promised to inform me if any disaffected persons caballed against me, and you now know what intrigues are carrying on against me." "I know not," replied the prince, "that any thing is now in agitation which will be detrimental to the emperor and the country." "I will take care," returned Biron, "to place this empire in such a situation, as no other person is capable of doing; for I am neither deficient in knowledge or in power." "The nobles must assist you," said the prince, "and you must all be accountable to the emperor." "Am I not regent," replied Biron, "with absolute authority? Such assertions, sir, may occasion great commotions; and your highness must know, that whenever factions arise, the emperor and the country are in danger; and what must be the inevitable consequence, if you and I should be at variance?" "A massacre!"

BOOK
XI.

returned the prince with great warmth, and putting at the same time his hand upon his sword.

After much altercation, the prince accused Biron of having forged the testament and signature of the empress; and the duke quitted the apartment with these words: "This affair, sir, is of such importance, that it must be laid before the principal nobility of the realm." Repairing instantly to his palace, he summoned the cabinet council, the senate, and the principal nobility, and acquainted them with the conversation which had passed between him and the prince. But when the imperial minister, Count Keyserling, who was present, endeavoured to justify the prince, he called the prince a liar, who had misrepresented the conversation; and turning to Keyserling, said, "we want here no advocates, and no lawyer's quirks;" and walking up and down the apartment in great agitation, exclaimed, "am I a poisoner! or do I contend for the throne and the scepter!"

The prince's Anne, who had been informed of the misunderstanding, now arriving, he turned to her, and explained with great bitterness what had already passed. Anne was exceedingly affected, and appeared to blame her husband's conduct. At length, the prince himself being summoned, was prevailed upon to attend, and soon afterwards made his appearance. Being reprimanded by Biron, and by several who were present, in the grossest terms, his highness at length submitted to demand pardon, the tears starting from his eyes from this necessary but degrading concession; and the affair was hushed up.

Soon

Soon afterwards, the regent sent a message by Marshal Munich, ordering the prince to resign his military employments, and not to stir out of his chamber. But this state of things could not last long. The regent, at variance with the parents of the emperor, suspicious of plots forming against him, and detested by the nation in general, became agitated and uneasy, felt the precariousness of his present situation, paid his court with great assiduity to the princess Elizabeth, and seems even to have formed the design of marrying her to the prince, his eldest son, and of raising her, or her nephew the duke of Holstein, to the throne of Russia. He was imprudent enough to declare publicly, that if the princess Anne was refractory, he would send her and her husband into Germany, and place the duke of Holstein on the throne.

While he was fluctuating concerning his future conduct, and laying plans to remove those who gave him umbrage, his own ruin came from a powerful quarter which he did not expect, and was not prepared to resist. Marshal Munich, secretly displeased with the regent at not being appointed generalissimo of the Russian forces, fomented the discontents, awakened the suspicions of the princess Anne, and prevailed upon her to permit him to arrest the duke of Courland. His offer being accepted, he succeeded in securing the person of the regent, and arrested him on the 18th of December, only twenty days after he had been appointed to the regency. Lieutenant-colonel Manstein, who was employed by Munich on that memo-

BOOK
XI.

nable occasion, and who has related the transaction in his Authentic Memoirs, penetrated, at the head of only twenty men, into the palace inhabited by the duke of Courland, though guarded by forty soldiers, who were placed under the windows of the regent's bed-chamber, and by numerous centinels posted in the several apartments through which he was to pass. Being personally known to the centinels, they permitted him to pass, thinking that he had an affair of consequence to communicate to the regent. Having burst open the door of his bed-chamber, he approached the bed, in which the duke and dutchess were so fast asleep, that the noise did not awaken them. On drawing the curtains, both started up in surprise, and the duke instantly got out of bed with an intention to escape, but was prevented by Manstein, who threw himself upon him, and held him fast till the soldiers came to his assistance. In this interval the duke had disengaged himself from Manstein, and endeavouring to burst from the soldiers who had laid hold of his arm, received several blows from the but-ends of their muskets. Being at length thrown down on the floor, his mouth gagged with a handkerchief, and his hands tied behind him with an officer's sash, he was led to the guard-room, where being covered with a soldier's cloak, he was conveyed in a carriage to the winter palace, in which the princess Anne resided. While he was leading away, the dutchess sprang out of bed, and though only in her shift, ran after him, screaming, in an agony of despair, into the street, till being forced away by the soldiers,

she

she dropped down upon the snow, and would have perished with cold, if the captain of the guard had not sent for some clothes to cover her, and re-conducted her to her apartment.

The next day the duke and his family were conveyed to the fortrefs of Schluffelburgh; and in June were removed to Pelim, a small town in Siberia, where he was imprifoned in a wooden houfe under the ftrictest confinement. Fortunately he did not long occupy this dreary prifon. The empress Elizabeth had no fooner afcended the throne, by the depofition of Ivan, than she recalled Biron from his imprifonment; and if his misfortunes had not foftened his vindictive fpirit, he enjoyed the pleafure of feeing his enemy, Marfhal Munich, occupy that prifon which he had juft quitted.

Biron was transferred to Yaroflaf, where he had a comfortable manfion affigned to him and his family, five roubles a day, and the permission of hunting within twenty or thirty miles of Yaroflaf. In this fituation, wretched when contrafted with his former dignified ftation as the omnipotent favourite of Anne, or as regent of Ruffia, but a paradife when compared with his prifon at Pelim, he paffed his days during the whole reign of Elizabeth.

On the demife of Elizabeth, Peter the Third recalled Biron to Peterfburgh, but did not reinftate him in the dutchy of Courland. Biron had refufed, during his confinement, to refign his right to that dutchy, although he was offered his liberty, and a
pension

BOOK
XI.

pension of 100,000 roubles per annum; nor could he be prevailed upon by Peter the Third to abdicate in favour of the duke of Holstein; nobly adding, that nothing should induce him to do such an injury to his family; but that he would prefer even a second imprisonment.

Catharine, soon after the revolution which placed her on the throne of Peter the Great, took compassion on his misfortunes, and restored him to his former dignity.

Biron repaired to Mittau in 1763, twenty-eight years after he had been elected duke of Courland, and for the first time since he had been raised to that dignity. Prince Charles of Saxony, although supported by a large party in Courland, yet receiving no assistance from his father Augustus the Third, was compelled to retire before the Russian forces; and Biron received the oaths of allegiance and fidelity from the whole nation.

In 1764, he obtained from the king and republic of Poland the investiture of Courland for his eldest son Peter, the present duke; in 1769, abdicated in his favour; and, in 1772, closed at Mittau, in the eighty-third year of his age, a life of almost unparalleled vicissitude.

The constitution * of Courland is of so complicated a nature, and the rights of Poland, of the duke, and of the diet, so inter-

* For the history and constitution of Courland, see Lænnig, Jus. Publ. Reg. Poloni. lib. I. c. x. sec. v. to vii. and Ziegenhorn's Staats Recht der Hertzogthuemer Courland and Semegallen.

woven, that in order to form a distinct and accurate relation, it will be necessary to separate and explain them with some degree of minuteness.

CHAP.
V.

From the historical sketch of the succession to the ducal throne of Courland, it will appear that Courland is a male-fief, dependent on and conferred by the crown of Poland.

The territorial superiority of Poland is settled by the *Pacta Subjectionis*, or acts of vassalage, ratified by the king of Poland and duke of Courland, when the duke receives his investiture.

This territorial right consists principally in the following articles: The king invests each duke with the duchies of Courland and Semigallia as fiefs of Poland; and receives his homage as from a vassal to his liege lord.

If Poland is engaged in war, the duke is bound to furnish 200 horse, or 500 infantry; and the nobles are likewise bound to supply, as their quota, 200 horse, or 30,000 dollars in the first year of the war, provided no Polish or enemy's troops are quartered in Courland, and 10,000 dollars in each of the succeeding years.

The money of Courland is to bear on one side, the head of the king, or the arms of Poland and Lithuania; it must also be struck upon the same standard as the coin of Poland. The Polish money must pass current in Courland, and the Courlandish in Poland.

The king settles all disputes between the duke and his subjects,

BOOK
XI.

jects, receives remonstrances against any infringement of privileges from the diet of Courland against the duke, and can order the redress of grievances.

The diet of Poland must finally ratify all laws which tend to alter or new-model the constitution of Courland, and which have been passed by the duke and diet of Courland, to be referred to the king and republic of Poland. The Polish diet also confirms the creation of nobles, and the *indigenat recht*, or right of naturalization, recommended by the duke and diet of Courland. It is also the supreme court of judicature, to which any noble may appeal, from the decision of the courts of justice in Courland. In all civil causes above the value of 500 Polish florins, and in all criminal cases specified in the statutes of Courland, the final decision is left to the king and republic of Poland. The king in return binds himself to support the constitution of Courland, the duke in all his prerogatives, and the nobles and burghers in all their privileges.

The duke and diet of Courland enjoy the supreme authority in all other circumstances, not contradictory to their feudal dependence on Poland, or which are not mentioned in the acts of subjection.

The duke is invested with the executive power, and the general administration of affairs. He has a negative in all the proceedings of the diet, confers the principal charges, both civil and military, enjoys the right of pardoning criminals, judges in particular cases without appeal, in all civil causes below 500 Polish

Polish florins; and in delinquencies and crimes not specified in the statute law of Courland.

CHAP.
V.

The duke, strictly speaking, has the right to declare war, make peace, or contract alliances; but although some instances of his exercising these prerogatives have occurred in the history of Courland, yet he usually consults his diet on these occasions. His revenues are very ample, and are derived from the ducal demesnes, which are supposed to contain one-third of the duchy, from tolls and customs, manerial and feudal rights, fines, and confiscations of goods, amounting to not less than £. 160,000 per annum, which almost entirely belongs to his own privy purse, as the expences of his court are trifling, and he is not permitted, by the laws of his country, to keep on foot more than 500 troops.

The prerogatives of the duke are circumscribed by his vassalage to Poland already mentioned, by the diet of Courland, and the privileges of the nobles.

Diets are ordinary or extraordinary; and both are convoked by the duke, either at his own suggestion, or at the request of the nobles.

Extraordinary diets are summoned as occasion requires. Ordinary diets are convoked every two years, about six weeks previous to the meeting of the Polish diet. With the circular letters expedited to the different parishes for the election of the deputies, the duke also sends the propositions called Deliberations, which are to be laid before the diet, and must, at the same

time, transmit any grievances, which are complained of by the body of nobles, for the consideration of that assembly.

The deputies must be noble, and are elected by the nobles in their respective parishes. The number of deputies returned is uncertain, because sometimes one parish chooses one or two deputies, and not unusually three parishes join in appointing only one, but may be estimated at not more than twenty-seven, the number of parishes.

The diet assembles generally at Mittau, and immediately chooses, by a majority of votes, a marshal or president. The deputies then, with the marshal at their head, repair to the palace, are received by the duke in state, kiss his hand, and are entertained at dinner.

The diet, conjointly with the duke, imposes taxes, and passes all laws and regulations which do not infringe on the feudal rights of Poland, or alter the constitution of the country; as all such propositions, after having been approved by the duke and diet, must be transmitted to the Polish diet for its approbation or rejection.

In all grievances, the diet first submits them to the duke; and if he considers them as nugatory, and refuses to redress them, the deputies enjoy the privilege of laying their remonstrances before the diet of Poland, as the supreme court of legislature.

All questions are carried or rejected by the majority; and each deputy must vote according to the instructions he has received from

from his constituents: but in all instances wherein the constituents have not fully instructed their deputy, his vote is null, and the sentiments of the majority prevail.

CHAP.

V.

From this absurd method of giving previous instructions, and the attempts of the deputies to elude them, many instances occur in the history of Courland, in which the minority have prevailed over the majority: this custom has also given rise to several attempts which, not without success, have been made for a single deputy to assume to himself the right of the *liberum veto* * in Poland, though under another name, and to be the means of dissolving the diet from his sole opposition.

At the dissolution of the diet, the deputies are bound to acquaint their constituents in person with the transactions of that assembly, a circumstance which necessarily gives rise to factions, and has not unfrequently occasioned civil commotions.

Many of the privileges of the nobles are enormous, and inconsistent with every principle of sound policy. A noble cannot be arrested, by order of the duke, for the most flagrant act, except within twenty-four hours after the commission of the crime; if he escapes during that time, he cannot be arrested without an order from the king and republic of Poland; he cannot be imprisoned till he is found guilty; and cannot be executed, but by the permission of the king and republic of Poland.

The highest and most important officers of state must be drawn from their body.

* See Book I. ch. vi.

BOOK
XI.

Nobles are exempted from the payment of all taxes and imposts whatsoever, being only bound, according to the feudal tenure, in time of war to furnish their quota of cavalry; and all goods and merchandise imported or exported for their use pay no duty.

Their power over their peasants is, if possible, more unbounded than that which the Polish gentry possess over their's. They enjoy the criminal jurisdiction without appeal; and though certain forms and limits are prescribed by the laws, yet, in effect, no such limitation takes place. In judging delinquencies and crimes, a noble can form a summary court of justice, composed of himself, three or four friends, and an attorney; and, after such a mock-trial, may order the delinquent to immediate execution, or to corporal punishment.

By the constitution of Courland, the duke is assisted in the administration of affairs by a privy council, called the Supreme Council, composed of four high counsellors, and two civilians or doctors, all appointed by the duke, but holding their places for life, unless proved to be guilty of malversation, and removed by the king of Poland. The four high counsellors are, the high steward, the chancellor, the burgrave, and the marshal.

The province of this council is to advise the duke in all concerns of state, to take care that the rights and privileges of the subject are not infringed, and to make remonstrances against any grievances.

The four high counsellors form also, in conjunction with the duke,

duke, the criminal court of judicature for the nobles, to which an appeal lies from the inferior courts of justice; and which judges, without farther appeal, all crimes excepting premeditated murder, wilful burning of houses, robbery, rapes, or open violence, which, as being capital, are referred to the king of Poland.

The same four high counsellors are invested with the regency, whether in the minority, absence, or sickness of the duke, or on a vacancy of the ducal throne. In these cases, the two civilians, who are considered as the duke's counsellors, are excluded, to the great detriment of the country, as they are usually the most enlightened counsellors, and not being nobles, are more inclined to encourage the arts and sciences, manufactures and commerce, and are particularly attentive, that the privileges of the lower orders should be preserved.

The enormous privileges of the nobles have been the occasion of fomenting the troubles, and exciting the civil commotions, which have overwhelmed Courland for this last century. Its internal history is little else than a continued series of disputes between the duke and the nobles; the boasted freedom of the country is a spirit of faction under the name of liberty, which, as in Poland, means an aristocratical licentiousness, oppressing others, but free itself to commit all kinds of enormities.

In all countries, wherever the spirit of feudal anarchy and feudal despotism (the worst species of tyranny) prevails, the peasants are oppressed, and agriculture is in a declining state; the
merchants

BOOK
XI.

merchants are despised, and commerce languishes; men of learning are neglected, and letters are uncultivated; the nobles and gentry alone enjoy the right of being land-holders, and center in themselves the whole powers and emoluments of government. Daily, however, this odious slavery loses ground; the age becomes more enlightened; the citizen, the merchant, the manufacturer, and the peasant, gain esteem and consequence; and the time perhaps is not distant, when they will burst the shackles, which prevent them from enjoying the common rights of man.

If the present duke should die without issue, the right of appointing the duke, according to the rules of succession lately established, would be vested in the diet of Courland, to be approved of by the king and republic of Poland. But as Courland is too small a state to act independently of the great neighbouring kingdoms, the nomination of the new duke would entirely depend on the will of that power which has most preponderance in the north, and consequently most influence in Poland.

When Poland was the great preponderating power, Courland was subservient to that republic; when Sweden, under Gustavus Adolphus, and his immediate successors, rose superior to Poland, Courland was overrun by the Swedes, and its sovereign led into captivity*. When the fortune of the house of Vasa declined, and Russia gained the ascendancy, Courland became almost a province of Russia; its dukes were elected and

* James duke of Courland, taken prisoner in 1458, by Charles X. king of Sweden.

deposed, its councils directed by the influence of the court of Peterburgh, and its dependence on Poland was a mere formality. But as Russia has lately lost her influence in Poland, the duke of Courland has emancipated himself from his absolute dependence on the court of Peterburgh. But whether this emancipation is temporary or permanent must depend on the fate of the present war, and the issue of the pending negotiations.

CHAP.
V.

The prevailing religion of Courland is the Lutheran, but all other religions are tolerated; and by the acts of subjection, the Roman catholics particularly are capable of holding all military and civil offices, that of the chancellor and a few others excepted.

The language of the natives in Courland is a dialect of the Livonian or Lettish, the same language which is spoken, with a little variation, by the natives in Livonia and Esthonia, and is probably derived from the Finnish. The nobles and gentry, being descended from German settlers, speak German; and that tongue is always used in the debates of the diet.

C H A P.

C H A P. VI.

*Memmel—Journey to Königsberg—Sketch of the History of Prussia
—Warsaw—General Remarks on the present Situation of Poland.*

BOOK
XI.

FROM Mittau we traversed the dutchy of Courland, a country swelling into gentle hills, and fertile in corn, hemp, and flax. The inhabitants export those commodities from the port of Libau on the Baltic, the only commercial town of Courland; and import in return, coffee, tea, wines, cloth, salt, and other foreign merchandize, which supply the interior consumption. The country is mostly open; but in some parts clothed with forests of pine and fir, dotted with occasional groves of fine oak, and sprinkled with much underwood. The villages are neat, the scattered cottages and gentlemen's seats prettily situated amid clumps of trees, and the inns provided with beds, a great luxury to travellers just come from Russia. The roads are extremely indifferent, and in this season of the year scarcely passable.

We quitted Courland, near Polangen, a small town of Poland, and, crossing over a narrow slip of Poland, entered Prussia, and soon reached Memmel, an ill-built town with narrow dirty streets, but remarkable for its extensive commerce.

Memmel is provided with the finest harbour in the Baltic.

In

In 1784, 996 ships, amongst which were 500 English, arrived here. The imports are chiefly salt, iron, and salted herrings; the exports, which greatly exceed the imports, are amber, corn, hemp, flax, and particularly timber. An English consul resides here. The trade is daily increasing, on account of the high duties which the court of Russia has laid on the imports of Riga.

Memmel is situated on the northern extremity of the *Curische Haf*, an inlet of the sea about seventy miles in length, which is here joined to the Baltic by a narrow strait. Having ferried over the Haf, we pursued our route along a spit of land, or a narrow peninsula enclosed between the *Curische Haf* and the Baltic. This spit of land is a sandy beach, about eighty miles long, and scarcely three broad, and almost solely inhabited by fishermen, who build their huts on the other side of the sandy eminence which forms the beach; and we scarcely saw a single house from the time we quitted Memmel, till we came to a small village encircled with a few corn fields and stubbed pines, about forty-four miles from Memmel, where we breakfasted the next morning.

During our route, one wheel of our carriage ran close to the edge of the water; and as the weather was mild and the sea calm the waves did not pass their bounds, and force us to drive along the deep and sloping sand-hills which bound the shore.

As the rate at which we travelled scarcely exceeded two miles and a half in the hour, we amused ourselves during the greatest

part of the day with walking on the beach, and picking up the pieces of amber which are thrown ashore by the waves of the sea in such large quantities as in some parts to seem like heaps of small shells.

After creeping near forty hours, we at length reached the southern termination of the spit of sand, and passed through a country agreeably diversified with hill and dale, and appearing still more agreeable from the contrast of the barren and desolate sand which we had just quitted. We reached Königsberg at midnight, after having employed fifty hours in traversing 20 German, or 90 English miles.

Prussia, of which Königsberg is the capital, is formed into two great divisions, eastern and western Prussia, both of which were united in the fourteenth century, subject to the Teutonic knights, and governed by a grand master of that order. During that and the following century, many disputes arose between the Teutonic knights and Poland concerning the boundaries of Poland and Prussia: and the grand master was constrained to do homage to the King of Poland for the possession of Prussia.

At length Albert, a prince of the electoral house of Brandenburg, being chosen grand master of Prussia in 1512, compromised the matter in dispute with Poland, by ceding to that crown Western Prussia, and reserving to himself Eastern Prussia, to be held as a ducal fief, descendible to his heirs male, and in failure of issue male, to revert to the crown of Poland. In consequence of this agreement, Albert received, in 1525, the in-

vestiture of Eastern Prussia from Sigismund, king of Poland; and at his death transmitted it quietly to his son Albert Frederic.

CHAP.
VI.

Albert Frederic being insane, his Prussian dominions were governed by his cousin George Frederic, and afterwards by John Sigismund, elector of Brandenburg, who had espoused Anne, eldest daughter of the duke of Prussia.

In 1611, John Sigismund obtained from Sigismund the Third, king of Poland, the investiture of ducal Prussia, as a vassal to the crown of Poland; and, on the death of his father-in-law, in 1618, succeeded, without opposition, to that duchy; thus annexing to his electoral dominions this valuable country.

In 1658, Frederic William, deservedly surnamed the Great Elector, obtained from John Casimir, and the republic of Poland, the abolition of his vassalage for Eastern Prussia, and the erection of that duchy into an independent sovereignty.

His son Frederic raised that duchy into a kingdom, and, in 1701, was crowned king of Prussia at Konigsberg; and the late king, Frederic the Second, wrested from Poland, by the treaty of partition, Polish or Western Prussia, and re-united the whole country under one sovereignty.

Konigsberg, the capital of the kingdom of Prussia, is about five miles in circumference; and including the garrison of 7,000 men, contains 60,000 inhabitants. It stands on the Pregel, a navigable river which flows from the north-western provinces of Poland, and here falls into the eastern extremity of the *Frische*

BOOK
XI.

Haf, an inlet of the Baltic. No ships drawing more than seven feet water can pass the bar, and come up to the town; so that the large vessels anchor at Pillau, a small town on the Baltic, which is the port of Königsberg; and the merchandise is sent in smaller vessels to this place.

The trade of Königsberg is very considerable, as will appear from the following table of the exports and imports for 1784:

GOODS

GOODS exported from KÖNIGSBERG, in 1784.

	To Holland.	To Britain and Ireland.	To France, Spain, and Portugal.	To Denmark and Norway.	To Sweden.	To Bremen, Lübeck, and Hamburg.	To Pomerania and Embden.	To Dantz and Elbing.	Totals.
Wheat —	1,930—	1,422—	1,121—	444—8	573—	936—	125—	—	6,551—8
Rye —	6,624—	990—	34—21	7,353—	8,303—	2,992—	2,728—	—	29,024—21
Barley —	402—	2,553—	153—	2,335—	2,522—	135—14	—	—	8,100—14
Malt —	—	—	—	—	154—	—	—	—	154—
Oats —	—	1,462—	219—12	218—	255—	129—	5—	—	2,290—12
Pease —	370—	1,420—	16—	117—	308—	151—	53—15	12—19	2,447—34
Sowing Linfeed —	—	301—	—	118—	420—	350—	119—	201—	1,519—
Crushing —	2,946—	1,290—47	—	42—	—	—	—	—	4,278—47
Hempfeed —	527—	—	—	21—	—	—	—46	1—33	550—22
Hempfeed oil —	—	—	—	11—	—	—	—	289—	300—
Hemp —	1,207—	26—	931—40	16—	14—	56—	726—	404—57	3,390—37
Flax —	1—	132—	43—	20—11	1—	16—	33—	34—18	280—29
Tow —	69—	—	—	2—34	1—	4—	251—	276—11	603—45
Pot-ashes —	2,712—	3,484—	562—7	840—	12—	138—	1,138—	8—7	8,895—4
Weed-ashes —	88—10	1—11	—	—3	—	—	1—	—11	92—11
Wax —	1,776—	101—	160—	—	—	3,432—	—	—	5,469—
Brittles —	2,845—	2,724—	—	—	37—	259—	—	99—	5,964—
Tallow —	42—	1,386—	—	118—	198—	—	755—	509—	3,008—
Yarn —	3—	4,103—	—	—	—	—	20—	121—	4,247—
Leather —	—	—	—	—	—	—	27—	312—	339—
Planks —	48—28	115—9	115—52	83—47	—10	11—42	4—25	—	379—33
Logs —	626—	621—	72—	305—	—	—	—	—	1,624—

GOODS

Ships cleared 1,986.

BOOK.
XI.GOODS imported at KONIGSBERG in PRUSSIA,
in 1784.

Goods by the Pound.

Lead	-	-	-	-	517,933
White lead	-	-	-	-	12,908
Lead shot	-	-	-	-	209,078
Steel	-	-	-	-	79,300
Tin	-	-	-	-	108,370
Copper	-	-	-	-	141,982
Sugar	-	-	-	-	2,412,306
Treacle	-	-	-	-	543,914
Almonds	-	-	-	-	75,856
Coffee	-	-	-	-	57,114
Currants	-	-	-	-	51,715
Cloves	-	-	-	-	1,472
Pepper	-	-	-	-	64,867
Ginger	-	-	-	-	36,303
Raisins	-	-	-	-	95,744
Prunes	-	-	-	-	9,130
Cinnamon	-	-	-	-	1,272
Cordamum	-	-	-	-	267
Rice	-	-	-	-	166,503
Tea	-	-	-	-	6,604
Tobacco	-	-	-	-	—

Brazil

IMPORTS OF KONIGSBERG.

311

Brazil wood	-	-	-	-	-	224,756
Indigo	-	-	-	-	-	32,192
Copperas	-	-	-	-	-	63,162
Saffron	-	-	-	-	-	183
Smalts	-	-	-	-	-	17,957
Allum	-	-	-	-	-	134,979
Iron wire	-	-	-	-	-	110,178
Brass wire	-	-	-	-	-	7,983
Iron plate	-	-	-	-	-	—
English sole leather	-	-	-	-	-	3,988

CHAP.
VI.

Goods by the Schip.

Iron	-	-	-	-	-	12,183
Dry fish	-	-	-	-	-	445

Goods by the Laft.

French falt	-	-	-	-	5,166	—	—
Spanish ditto	-	-	-	-	2,345	16	—
Pomeranian ditto	-	-	-	-	4,163	—	—
Coals	-	-	-	-	158	—	5
Lime	-	-	-	-	—	—	—

Goods by the Cask.

Dutch herrings	-	-	-	-	-	1,081
Swedish ditto	-	-	-	-	-	32,980
Tar	-	-	-	-	-	1,054
Train oil	-	-	-	-	-	559

French

BOOK
XI.

French wine	-	-	-	-	12,214
Frontiniac ditto	-	-	-	-	112
Rhenish and Mosel ditto	-	-	-	-	116
Spanish ditto	-	-	-	-	57
Canary ditto	-	-	-	-	—
French brandy	-	-	-	-	734
Vinegar	-	-	-	-	546
Sweet oil	-	-	-	-	147

Goods by the Value.

Rix-dollars.

Broad cloth	-	-	-	-	60,778
Medicines and drugs	-	-	-	-	1,161
Burgundy and Champaign wine	-	-	-	-	22,430

Goods by the Chest.

Tin plate	-	-	-	-	182
Window glaſs	-	-	-	-	873

Goods by the Piece.

Oysters	-	-	-	-	14,375
Lemons and oranges	-	-	-	-	278,838
Chalder grindstones	-	-	-	-	365

Ships entered 1,964.

Konigsberg contains an univerſity, founded by Albert of Brandenburg. According to the original endowment there were forty profeſſors; but their number is now reduced to fixteen. Each profeſſor receives a ſalary of about £. 50 per annum, which may be increaſed by private lectures. In 1775, the univerſity

versity contained 800 students, of whom 200 are lodged and boarded at the expence of the crown. There are three public libraries in the town, the Royal or University Library, the Town Library, and the Wallenrodt Library, so called, because it was given by Martien von Wallenrodt, in 1650.

In the last-mentioned collection I was shewn the original safe-conduct granted to Luther by Charles the Fifth, and signed by that emperor's own hand. Trusting to this safe-conduct, Luther appeared at the diet of Worms, notwithstanding the remonstrances of his friends, who reminded him of the fate of John Hufs on a similar occasion. But Luther, with that undaunted spirit which accompanied all his actions, silenced his friends by declaring, that he was lawfully called to appear in that city, and "thither will I go," he added, "though as many devils as there are tiles in the houses were combined against me."

As he could not be prevailed upon, either by threats or intreaties, to retract his opinions, some of the Romish clergy, with that scandalous sophistry which deemed that faith ought not to be kept with heretics, proposed to imitate the example of the Council of Constance, and to condemn Luther to the flames. But as the members of the diet startled with horror at another violation of the public faith, and as Charles peremptorily refused to stain his administration by such an ignominious action, Luther was permitted to retire in safety *, and completed the reforma-

* Robertson's Charles V. vol. ii. p. 123.

tion, which was introduced into these parts by Albert of Brandenburg, the first duke of Prussia.

March 29. About seventy miles from Königsberg, we quitted the Black Eagle of Prussia and recognized the White Eagle of Poland; and, passing through several miserable villages, which announced the wretchedness of Poland, we reached, on the evening of the 31st, Warsaw, without meeting with a single object worthy of attention, or a single adventure worthy of notice.

This second visit to Warsaw furnished me with little additional matter. Having before described our presentation at court, and reception from Stanislaus Augustus, I shall not again repeat similar marks of condescendence and benignity with which I was honoured by that amiable sovereign, nor the hospitable manner in which I was again received by the Polish nobility.

The reader will recollect that, in 1779, when I first visited Warsaw, I described Poland as almost a Russian province, governed by the ambassador of Catharine the Second.

In my second tour, I found the whole kingdom in a state of the same subjection to Russia as in my first expedition, and fatally announcing, by its total dependance on a foreign power, its sad decline from its former preponderance in the north, and the wretched constitution by which it is governed.

Although it is foreign to my purpose to take notice of any changes which may have taken place in Poland since my departure, in May 1785, yet I cannot avoid remarking, that in 1789 and 1790, the empress of Russia entirely lost her influence in

that country, withdrew her troops, and recalled her embassador; and that the natives had made some efforts to increase and discipline their army, and to raise their consequence in the consideration of Europe.

CHAP.
VI.

The permanent council has been abolished, and several alterations introduced into the form of government, tending to emancipate the country from the influence of Russia, and to restore it to itself, if it is possible to restore a country in which anarchy is the characteristic feature.

But as long as the monarchy continues elective, as long as the nobles and gentry alone enjoy the right of possessing land, and as long as the peasants are slaves, all alterations in the form of government must be merely nominal, and its essence must still continue the same. The king must always be a puppet in the hands of his most powerful neighbour, and the nobles, in whom are vested the supreme authority, turbulent, and above controul, except awed by some foreign power.

In fact, Poland has no nerve or vigour of its own, but receives its impulse from one of the great neighbouring powers by which it is surrounded. By the change of northern politics, the king of Prussia, in alliance with Great Britain and Holland, has succeeded to the influence before possessed by Catharine the Second, and directs the republic almost with the same unbounded sway. But the fate of Poland, like that of its vassal the duke of Courland, must ultimately depend upon the event of the present war kindled between Russia on one side, and the Swedes and the Turks on

BOOK
XI.

the other, and on the final tendency of the negotiations, either to enlarge or to confine the preponderance of Russia in the scale of the North.

APPENDIX.

A P P E N D I X.

N° I.

Geographical Division of the Russian Empire into Governments, Provinces, and Districts.

AS the new division of Russia into governments, provinces, and districts, has totally altered the geography of that vast empire; and as no accurate account of the general division yet given to the public has fallen under my observation, I shall here subjoin a list communicated to me in February, 1785, from undoubted authority.

In comparing this list of governments with that given in p. 224 of this work, the reader will find a difference in the number and names of the governments; for instance, this list enumerates 41, the other 40 governments. This list mentions the governments of Archangel, Catherinenflaf, Olonetz, and Caucasus; and the other those of Astracan, Azof, and New Russia. But this difference may easily be reconciled, by considering that the former list was made in 1782, the latter in 1784, when several alterations had taken place in the names of the governments, particularly that Olo-
netz

netz was formerly included in the government of Novogorod, and Archangel in that of Vologda, from which they have been since separated; and that the names of New Russia and of Azof have been changed for that of Ecaterinenflaf; and that the government of Caucasus has been lately added, and comprises the government of Astracan.

Present Division of the Russian Empire into Governments, Provinces, and Districts.

Forty-one Governments.

I. Government of St. Petersburg.

This government comprises that tract of country called Ingermanland, or Ingria, wrested by Peter the Great from the Swedes, and confirmed to Russia at the peace of Nyftadt, in 1721.

It is divided into 10 districts.

1. St. Petersburg.
2. Oranienbaum, on the gulph of Finland.
3. Yfamburgh, on the river Luga, discharging itself into the gulf of Finland.
4. Luga, on the upper part of the same river.
5. Narva, on the river Narova, which falls into the gulf of Finland.
6. Gvof, near the east side of lake Peipus, on a rivulet called Gvofka.
7. Rokeftven, or Rokeftvensk, on the rivulet Oredesh, falling into the Luga.
8. Sophia, near Zarfkoe Zelo.
9. Schlueffelburgh, on the Neva, where this river issues from the Ladoga.
10. New Ladoga, on the river Volkhof, between the lake and the channel of the Ladoga.

II. Government of Olonetz,

Formerly included in the government of Novogorod,

Contains 5 districts.

1. Petrofavadsk, on the river Schua, falling into the lake Onega.
2. Olonetz, on the river Olonza, falling into the east side of the Ladoga.
3. Vytegra,

3. Vytegra, on the river of the same name, falling into the south side of the Onega.
4. Kargopol, near the river Onega, at its origin from the lake Latcha.
5. Povenetz, on the north side of the Onega, where the rapid rivulet Povenetz falls into it.

III. Government of Wiburgh, or Ruffian Finland.

This government was formerly subject to Sweden, and comprized in Carelia; part was ceded to Ruffia at the peace of Nyftadt, in 1721, and part by the treaty of Abo, 1741.

It contains 6 districts.

1. Wiburgh, on the north side of the gulf of Finland.
2. Willmanstrand, near the lake Saima.
3. Frederichsham, on the gulf of Finland.
4. Nyflot, near the lake Utrufs.
5. Kexholm, on two small islands of the river Woxen, falling into the Ladoga.
6. Serdobol, on the north-western side of the Ladoga.

IV. Government of Revel, or Esthonia.

Revel was confirmed to the Swedes at the peace of Oliva, conquered by Peter the Great in 1710, and finally ceded to Ruffia in 1721.

It contains 5 districts.

1. Revel, on the Baltic sea.
2. Baltic-Port, about 40 versts westward from Revel.
3. Habsal, or Hapsal, a maritime town.
4. Weiffenstein, on the rivulet Saida, about 80 versts from Revel.
5. Wefenberg, about 100 versts from Revel, at about an equal distance from that town and Narva.

V. Government of Riga, or Livonia, ceded to Ruffia in 1721.

It contains 9 districts.

1. Riga, on the Duna, 14 versts from its mouth.
2. Wenden, on the river Aa.

3. Wolmar,

3. Wolmar, on the same river.
4. Walk, on a rivulet falling into the south side of lake Wyrtyz.
5. Werro, on the west side of lake Peipus.
6. Dorpt, on the river Em, or Embak, which issues from the lake Wyrtyz, and falls into the Peipus.
7. Fellin, on the small river of the same name.
8. Perneau, on the river of that name, near the Baltic Sea.
9. Arensburgh, on the island Oesel.

VI. Government of Pskof,

Formerly a republic, subdued by Vassili Ivanovitch, and formerly comprised in the government of Novogorod,

Contains 9 districts.

1. Pskof, called by foreigners Pleskof, on the river Velika, or Velikaia.
2. Petchora, on the rivulet Simsha, falling into the south part of the Peipus, or the lake of Pskof.
3. Ostrof, or Ostroffk, on an island of the river Velika.
4. Opotchka, on an island of the same river.
5. Novorshef, on an island of the small lake Padzo, through which flows the river Velikaia.
6. Velikie Luki, on the left side of the river Lovat, falling into the lake Ilmen.
7. Toropez, on the river Toropa, falling into the Duna.
8. Kholm, on the river Lovat.
9. Porkhof, on the river Schelef.

VII. Government of Novogorod,

A powerful republic, finally reduced by Ivan Vassilievitch II. and united to the Russian empire,

Contains 10 districts.

1. Novogorod, on the river Volkhof, near the lake Ilmen.
2. Kreftetz, on the river Khlova, falling into the Msta.
3. Staraia Ruffa, on the river Polish, about 15 versts south of the Ilmen.
4. Valdai, on the west side of the lake of Valdai.
5. Borovitchi, on the river Msta.

6. Tikhvin,

6. Tikhvin, on the rivulet of that name, falling into the Siafs, which discharges itself into the Ladoga.
7. Uftiufhna, on the Mologa, falling into the Volga.
8. Tcherepovetz, on the river Schekfna, falling into the Volga.
9. Kirilof, on the fame river.
10. Bieloferfk, on the fouth fide of the Bielofero, near the river Schekfna.

VIII. Government of Tver,

An independent principality, united to the Ruffian empire by Ivan Vaffilievitch, and comprifed in the government of Novogorod. It was feparated from Novogorod, and was the firft government eftablifhed upon the new plan.

Contains 13 diftricts.

1. Tver, on the Volga, where that river is joined by the Tverza.
2. Vyfhnei Volotchok, on the river Zna.
3. Torfhok, on the Tverza.
4. Oftachkof, on an ifland of the lake Seliger.
5. Rfhch-Volodimerof, on the left fide of the Volga.
6. Subzof, on the left fide of the fame river
7. Staritza, on the Volga.
8. Krafnoi Kholm, on the river Schoca, which falls into the Mologa.
9. Kcliafin, on the Volga.
10. Kakin, near the Volga.
11. Beshetzk, on the Mologa.
12. Kortchera, or Kortchef, on the Volga.
13. Vefiegonfk, on the river Mologa.

IX. Government of Smolensko,

After being an object of contention, and reciprocally poffeffed by Poland and Ruffia, was conquered by Alexey Michaelovitch in 1654, and finally ceded to Ruffia at the peace of Mofcow, in 1666,

Contains 12 diftricts.

1. Smolensko, on both fides of the Dnieper.
2. Poretchie, on the river Kafpia, falling into the Duna.

VOL. III.

T t

3. Dukortchina,

3. Dukortchina, on the Dnieper.
4. Bieloï, on the small river Vobissha, falling into the Messha, which discharges itself into the Duna.
5. Sytchersk, on the river Vafusa, falling into the Volga.
6. Gshatsk, or Gshat, on the river Gshat, falling into the Vafusa.
7. Viasma, on the river Viasma, falling into the Dnieper.
8. Dorogobush, on the Dnieper.
9. Yukhnof, on the Ugra, falling into the Occa.
10. Felna, on the Desna.
11. Rostarl, on the Oster, which falls into the Sosh.
12. Krasnoi, on a rivulet which falls into the Dnieper.

X. Government of Polotsk,

Dismembered from Poland by the Treaty of Partition in 1772,

Contains 11 districts.

1. Polotsk, on the Duna, at the mouth of the small river Polota.
2. Drissa, or Drysin, on the river Drissa, falling into the Duna.
3. Dunaburgh, on the right side of the Duna.
4. Refitza, on the rivulet Refiza, or Rositten, falling into the lake Liubahn.
5. Liutzin, on the river Lissha, which falls into the river Velikaja.
6. Sebesk, on the lake Sebesk.
7. Nevel, on the lake Nevel.
8. Vifebsk, on the Duna.
9. Gorodetsk, or Gorodok, on a rivulet falling into the Duna.
10. Velisk, on the Duna.
11. Surask, on the Duna.

XI. Government of Mohilef,

Dismembered also by the Treaty of Partition in 1772,

Contains 11 districts.

1. Mohilef, on the Dnieper.
2. Kopyfs, on the Dnieper.
3. Orsha, on the Dnieper.
4. Sennoi, near lake Sennoie, communicating with the Duna.
5. Babinovitchi, on the river Lutchoffa, falling into the Duna.
6. Mishislaf, on the river Vokra, falling into the Sosh.

7. Klimovitchi,

7. Klimovitchi, on the river Oster, falling into the Sosh.
8. Tschauy, on the river Pronja, falling into the Sosh.
9. Staroi Bykhof, on the Dnieper.
10. Rogatchef, near the Polish frontiers, where the river Drutz, or Drugez, falls into the Dnieper.
11. Belitz, on a rivulet falling into the Sosh.

XII. Government of Orel,

Once a province of the government of Bielgorod,
Contains 13 districts.

1. Orel, on the rivers Occa and Orel.
2. Kromy, on the Occa.
3. Mzensk, on the rivulets Susha and Mezna, falling into the Occa.
4. Bolkof, on the river Nugra, falling into the Occa.
5. Livny, on the left side of the river Sossna, falling into the Don.
6. Feletz, on the left side of the river Sossna.
7. Siefk, on the river Sief, falling into the Desna.
8. Maloi Arkhangelsk, on the river Sossna.
9. Dmitrofsk, on the rivulet Neruser, falling into the Sief.
10. Dechkin, on the Occa.
11. Trubtchefsk, on the left side of the Desna.
12. Bransk, on the Desna.
13. Karatchef, on the rivulet Snafet, falling into the Desna.

XIII. Government of Kaluga,

Formerly a province in the government of Moscow,
Contains 12 districts.

1. Kaluga, on the Occa.
2. Maloiaroslavetz, on the small river Lusha, falling into the Occa.
3. Barovsk, on the river Protva, falling into the Occa.
4. Tarussa, on the Occa.
5. Likhvin, on the left side of the Occa.
6. Kofelsk, on the left side of the small river Shidra, falling into the Occa.
7. Medynsk, on a rivulet falling into the Ugra.
8. Peremyschl, on the left side of the Occa.
9. Mechovsk, on a rivulet falling into the Shidra.
10. Mossalsk,

10. Mossalsk, on a small river falling into the Ugra.
11. Serpeisk, on the small river Serpei, falling into the Ugra.
12. Shisdra, on the river of the same name.

XIV. Government of Moscow,

One of the most antient and most conspicuous provinces of the Russian empire. Its capital, Moscow, built in 1147, was the residence of the sovereign, till Peter the Great transferred the seat of empire to Peterburgh.

Contains 15 districts.

1. Moscow, on the river Moscva, falling into the Occa.
2. Kolomna Moscva, about 5 versts from its junction with the Occa.
3. Bronnitsy, on the Moscva, between Moscow and Kolomna.
4. Podol, or Podolsk, on the river Pakria, falling into the Moscva.
5. Nikitsk, on the same river.
6. Serpukhof, on the river Nara, 4 versts from its junction with the Occa.
7. Vereia, on the river Protva, falling into the Occa.
8. Moshaik, on the small river Moshaika, falling into the Moscva.
9. Rusa, on the left side of the river Rusa, falling into the Moscva.
10. Voskresenk, on the river Ister, falling into the Moscva.
11. Svenigorod, on the Moscva, near the mouth of the Ister.
12. Voloklamskoi, or Volokolampsk, on the river Lama, falling into the Schoska, which discharges itself into the Volga.
13. Klin, on the river Seftra, falling into the Dubnia, which joins the Volga.
14. Dinitrof, on the small river Vakhroma, which, uniting with the Seftra, forms the river Dubnia.
15. Bogorodsk, on the river Kliasma.

XV. Government of Tula,

Formerly a province of the government of Moscow,

Contains 12 districts.

1. Tula, on the river Upa, falling into the Occa.
2. Krapirna, on the same river.
3. Odeief, on the same river.

4. Venef,

4. Venef, on the rivulet Venefka, falling into the Ofsetr, which joins the Occa.
5. Alexin, on the Occa.
6. Kachira, on the same river.
7. Bagoroditzk, on the river Upa.
8. Tschern, on the rivulet of the same name, falling into the Susha, which flows into the Occa.
9. Novosyl, on the rivulet Nerutchka, falling into the Susha.
10. Bielef, on the Occa.
11. Epiphan, on the Don.
12. Ephremof, or Yephremof, on the river Metcha, falling into the Don.

XVI. Government of Refan,

Formerly a province of the government of Moscow,

Contains 12 districts.

1. Refan, on the Trubesh, falling into the Occa.
2. Saraifn, on the river Ofetr.
3. Pronfk, on the river Pronca, falling into the Occa.
4. Mikhailof, on the river Pronca.
5. Skopin, on the small river Ranvf, falling into the Occa.
6. Riachk, on a rivulet falling into the Voronefk.
7. Kassimof, on the Occa.
8. Raninburgh, on the river Refe, falling into the Voronefh.
9. Spask, on the Occa.
10. Yegorief, or Yegorjeffk, on a small river falling into the Occa.
11. Sapofhok, on a river falling into the Occa.
12. Donkof, or Dankof, on the Don.

XVII. Government of Volodimir,

Formerly a province of the government of Moscow,

Contains 14 districts.

1. Volodimir, or Vladimir, on the river Kliasma.
2. Susdal, on a rivulet falling into the Kliasma.
3. Yurief Polskoi, on a small river falling into the Kliasma.
4. Alexandrof, or Alexandroffk, on the river Schernia, falling into the Kliasma.
5. Kovrof, on the river Kliasma.
6. Pokrof, on the same river.
7. Gorokhovetzk,

7. Gorokhovetz, on the same river.
8. Sudogda, on a river of the same name, falling into the Kliasma.
9. Viasniki, on the river Kliasma.
10. Murom, on the Occa.
11. Pereaslavl Salekoi, on the rivulet Trubesh, falling into the lake of Pereaslavl.
12. Schuia, on the river Tefs, falling into the Kliasma.
13. Kirshatch, on a rivulet falling into the Kliasma.
14. Melenki, on the small river Unsha, falling into the Occa.

XVIII. Government of Yaroslaf,

Formerly a province of the government of Moscow,

Contains 12 districts.

1. Yaroslaf, on the Volga, where the river Kotoroff falls into it.
2. Rostof, on the north side of the small lake Nero, called therefore likewise the lake of Rostof, communicating with the Volga by the river Kotoroff.
3. Barissoglebsk, on the Volga.
4. Romanof, on the Volga, opposite to the last-mentioned town.
5. Danilo, on a rivulet falling into the Volga.
6. Liubim, on the river Negra, falling into the Kastroma.
7. Pocheckhon, or Pocheckhonie, on the river Sagosha, falling into the Schekma.
8. Uglitch, on the Volga.
9. Rybnoi, on the Volga.
10. Mychkin, on the Volga.
11. Petroffk, on a small river falling into the lake Nero.
12. Mologa, on the Volga.

XIX. Government of Vologda,

Formerly the largest of all the Russian European governments, as it contained the provinces of Vologda, Archangel and Veliki-Ustiug.

This government is divided into two provinces, Vologda and Veliki Ustiug.

Province

Province of Vologda,

Contains 5 districts.

1. Vologda, on the river Vologda, falling into the Sukhona.
2. Griafovetz, on a river falling into the Sukhona.
3. Kadnikof, on a river falling likewise into the Sukhona.
4. Totma, on the left side of the Sukhona.
5. Velefk, or Velsk, on the river Vaga.

Province of Veliki-Uftiug

Contains 7 districts.

1. Uftiug-Veliki, on the river Sukhona.
2. Nikol'sk, on a rivulet falling into the Sukhona.
3. Lalsk, on the small river Liála, falling into the Lufa.
4. Solvytchegod'sk, or Solivytychegod'sk, on the river Vytchegda.
5. Krasnobor'sk, on the left side of the Dvina.
6. Yaren'sk, on the right side of the Vytchegda, where it takes in the small river Yarenga.
7. Uftysolk, on the river Syssol, falling about a verst below this town into the Vytchegda.

XX. Government of Archangel,

Formerly included in the government of Vologda,

Contains 7 districts.

1. Archangel, on the Dvina, about 70 versts from its mouth.
2. Kholmogory, on the Dvina.
3. Schenkursk, on the river Vaga.
4. Pineg, on the right side of the Dvina, where the river Pinega falls into it.
5. Onega, on the river Onega, in Russian Lapland.
6. Kola, on the river Kola, near the Bay of Kola, in the Frozen Ocean.
7. Mesen, on the river Mesen, falling into the Frozen Sea.

†

XXI. Government

XXI. Government of Kostroma,

Formerly included in the government of Moscow,

Two provinces,

A. Kostroma, B. Unzha,

Contains 11 districts.

1. Kostroma, near the mouth of the Volga.
2. Nerechta, on a rivulet falling into the Volga.
3. Ples, on the Volga.
4. Kadyi, on a rivulet falling into the Volga.
5. Bui, on the river Kostroma, where it takes in the river Vara.
6. Galitch, on the lake of that name, communicating with the river Kostroma by the small rivulet Vara.
7. Tchukhloma, near a lake of the same name.
8. Solgalitzk, on the Kostroma.
9. Kinechma, on the Volga.
10. Yuricvetz Povolskvi, on the Volga, three versts below the mouth of the Unzha.
11. Lukh, on a river falling into the Volga.

B. Province of Unzha,

Contains 3 districts.

1. Makarief, on the Unzha.
2. Varnovin, on the river Vetluga.
3. Vetluga, on the same river.

XXII. Government of Nishnei Novogorod,

Contains 13 districts.

1. Nishnei Novogorod, on the Volga, below the mouth of the Occa.
2. Balakhna, on the right side of the Volga.
3. Arfamas, on the small river Tesh, falling into the Occa.
4. Makarief, on the Volga.
5. Vassil, on the Volga.
6. Semenov, on the rivulet Kershenz, falling into the Volga.
7. Ardatof, on the river Tesh, falling into the Occa.

8. Gorbatof,

8. Gorbatoſ, on the Occa.
9. Sergatch, on the river Piana, falling into the Sura.
10. Perevoſs, on the ſame river.
11. Kniagin, on a rivulet falling into the Volga.
12. Lykaianof, on the upper part of the Teſh.
13. Potchinki, on the river Alator, falling into the Sura.

XXIII. Government of Kaſan,

Conquered from the Tartars by Ivan Vaſſilievitch II. in 1552.

Contains 13 diſtricts.

1. Kaſan, on the rivulet Kaſanka, falling into the Volga.
2. Sviaſk, on the river Sviaga, a few verſts from its junction with the Volga.
3. Arſk, on the river Kaſanka.
4. Zyvilſk, on the river Zyvil, falling into the Volga.
5. Tſchebaxar, on the Volga, near the mouth of the rivulet Tſchebaxarka.
6. Yadrin, on the river Sura.
7. Kuſmodemianſk, on the Volga.
8. Tzarevokokchaifk, on a rivulet Malaia Kokchaga, falling into the Volga.
9. Tetiuki, on the Volga.
10. Laikef, on the river Kama.
11. Spafk, on the Volga.
12. Tchifzopolſk, on the Kama.
13. Mamadyſh, on the Viatka, falling into the Kama.

XXIV. Government of Simbirſk,

Formerly a province of the kingdom of Kaſan,

Contains 13 diſtricts.

1. Simbirſk, or Sinbirſk, on the Volga.
2. Singilief, on the Volga.
3. Stavropol, on the Volga.
4. Samara, near the junction of the Volga and Samara.
5. Siſran, on the Volga, where it takes in the ſmall river Siſran.
6. Kanadei, on the river Siſran.
7. Tagai, on a rivulet falling into the Sviaga.
8. Buinſk, on the river Sviaga.

VOL. III.

U u

9. Karſun,

9. Karfun, on a small river falling into the Sura.
10. Kotiakof, on the right side of the river Sura.
11. Ardatof, on the Alator.
12. Alatoc, on the Sura, where it takes in the Alator.
13. Kurmyk, on the Sura.

XXV. Government of Penza,

Formerly a province of Kafan,

Contains 13 districts.

1. Penza, on the river Sura, where it receives the rivulet Penfa.
2. Mokchainfk, west of Penza.
3. Infara, on the river Infara, falling into the Mokcha.
4. Verkhnei Lomof, on the river Lomof.
5. Nishnie Lomof, on the same river.
6. Narovtchat, on a rivulet falling into the Mokcha, which joins the Occa.
7. Troitzk, on the Mokcha.
8. Krasnoslobodfk, on the same river.
9. Scheckeief, on a rivulet falling into the Alator.
10. Saransk, on another rivulet falling into the Alator.
11. Goroditch, on a rivulet falling into the Sura.
12. Kerensk, on a rivulet falling into the Mokcha.
13. Tchembar, on the small river Tchembar, falling into the Vorona, which flows to the Khoper.

XXVI. Government of Tanbof,

Formerly part of the government of Voronetz,

Contains 13 districts.

1. Tambof, on the river Zna, which falls into the Mokcha.
2. Schatfk, on the rivulet Schat, falling into the Zna.
3. Kadom, on the river Mokcha.
4. Temnikof, on the same river.
5. Iclatma, on the Occa.
6. Koslof, on the rivulet Ufnoi Voronetz.
7. Ufman, on the small river Ufman, falling into the Voronetz.
8. Lebedian, on the Don.

9. Borissoglebsk, on the Khoper.
10. Morca, on the Zna.
11. Spask, on a rivulet falling into the Mokcha.
12. Kirssanof, on the Vorona, falling into the Khoper.
13. Lipetzk, on the Voronetz.

XXVII. Government of Voronetz,
Contains 15 districts.

1. Vδronetz, on the river Voronezh, about 14 versts from its junction with the Don.
2. Sadonsk, on the Don.
3. Semliansk, on a rivulet falling into the Don.
4. Nishnedeuitzk, on the rivulet Devitza, falling into the Don.
5. Korotoian, on the Don.
6. Bobrof, on the Biliuk, falling into the Don.
7. Birutch, on the river Sosna, falling into the Don.
8. Ostrogoschk, on a rivulet falling into the Sosna.
9. Pavlovsk, on the Don.
10. Kalitva, on the rivulet Kalitva, falling into the Don.
11. Bogutchar, on a rivulet of the same name, falling into the Don.
12. Bielovodsk, on the river Derkul, falling into the Donek.
13. Valuiki, on the river Oskol, where it receives the rivulet Valui.
14. Livenk, on the rivulet Valui.
15. Kupensk on the river Oskol.

XXVIII. Government of Kursk,
Formerly part of the government of Bielgorød,
Contains 13 districts.

1. Kursk, on the river Tukor, falling into the river Seim, or Sem.
2. Lgof, on the Seim.
3. Rylsk, on the same river.
4. Pretive, on the same river.
5. Fateh, on a rivulet falling into the Svopa.
6. Tchigry, on a rivulet falling into the Tim.
7. Tim, on the river of the same name, falling into the Sosna.
8. Oboian, on the river Pfol.
9. Sudsha, on a rivulet of the same name, falling into the Pfol.
10. Bogatoi,

10. Bogatoi, on the rivulet Penna, falling into the Pfol.
11. Dmitrief, on the Svopa.
12. Bielgorod, on the Donetsk.
13. Korotcha, on the rivulet of that name, falling into the Donetsk.
14. Novoi Oskol, on the Oskol.
15. Staroi Oskol, on a river of that name.

XXIX. Government of Novogorod Severskoi,

Part of the Ukraine, or Little Russia,

Contains 11 districts.

1. Novogorod Severskoi, on the right shore of the Desna.
2. Pogar, on the Sudosh, falling into the Desna.
3. Mglin, on a rivulet falling into the Ipul.
4. Starodub, on a rivulet falling into the Sudosh.
5. Sosnitsa, on the Desna.
6. Korop, on the left shore of the same river.
7. Korolevets, on a rivulet falling into the Desna.
8. Glukhof, on the river Yesna, falling into the Seim.
9. Konotop, on a rivulet falling into the Seim.
10. Surash, or Surashsk, on the Ipul.
11. Novomeshsk, on the same river.

XXX. Government of Tchernigof,

Formerly part of the Ukraine,

Contains 11 districts.

1. Tchernigof, on the right shore of the Desna.
2. Beresna, or Beresin, on the Desna.
3. Gorodnizk, on a rivulet falling into the Snof, which joins the Sosna.
4. Neshin, on the Oster, falling into the Desna.
5. Romen, or Romna, on the river Sula.
6. Glinisk, on the same river.
7. Priluki, on the Udai, falling into the Sula.
8. Borfna, on a rivulet of the same name, falling into the Desna.
9. Lokhvitza, on the river Sula.

11. Gaditch,

- 10. Gaditch, on the Pfol.
- 11. Senkof, on a rivulet falling into the Pfol.

XXXI. Government of Kiof,

Being part of the Ukraine, or Little Ruffia, was once a dutchy belonging to the great dukes, and Kiof, the capital, was their principal residence. This country was conquered by the Tartars, came again into the possession of the great dukes, but was over-ran and possessed by the Cossacs, under the protection of Poland.

In 1654, the natives, discontented with John Casimir, king of Poland, submitted to Ruffia, and have ever since continued subject to that empire. The vast privileges enjoyed by the natives have been gradually abolished, and they are now reduced to the same state as the other provinces of the Russian empire.

Contains 11 districts.

- 1. Kiof, on the Dnieper.
- 2. Oster, on the Desna.
- 3. Koselatz, on the Oster.
- 4. Piriatin, on the Udai.
- 5. Periaslaf, on the Trubesh, falling into the Dnieper.
- 6. Solotonok, on a rivulet of the same name, falling into the Dnieper.
- 7. Lubny, on the river Sula.
- 8. Khorol, on the river of the same name, falling into the Pfol.
- 9. Mirgorod, on the same river.
- 10. Goltva, on the Pfol.
- 11. Goroditche, on the Dnieper.

XXXII. Government

XXXII. Government of Kharkof,

Formerly comprised in the government of Ukrania Slovodskaia,

Contains 15 districts.

1. Kharkof, on the Uda, falling into the Donetz.
2. Tchuguief, on the Donetz.
3. Isium, on the same river.
4. Woltchansk, on a rivulet falling into the Donetz.
5. Solatchef, on the Uda.
6. Walki, on a rivulet falling into the Donetz.
7. Bogodukhof, on the Merlo, falling into the Vorokla.
8. Krasnokutsk, on the same river.
9. Akhtyrka, on the rivulet Akhtyrka, falling into the left shore of the Vorokla.
10. Khotmyk, on the Vorokla.
11. Lebedin, on a rivulet Oltchanka, falling into the Pfol.
12. Sumy, on the right shore of the Pfol.
13. Miropolie, on the same river.
14. Nedrigailof, on the river Sula.
15. Bielopolie, on a rivulet falling into the Seim.

XXXIII. Government of Catherinenflaf, or Ecaterinenflaf.

This government contains the greatest part of that territory which was wrested by the present empress from the Turks, and comprises New Russia, the former government of Azof, and Crim Tartary.

It is divided into the two provinces of Catherinenflaf and Taurida.

Province of Catherinenflaf,

Contains 14 districts.

1. Catharinenflaf, on the Dnieper.
2. Poltava, on the Vorokla.
3. Krementchuk, on the Dnieper.
4. Elisabethgral, on the Ingul, falling into the Bug.

5. Alexandria,

5. Alexandria, on the Inguletz, falling into the Dnieper.
6. Kherfon, on the Dnieper, about 14 versts below the mouth of the Inguletz.
7. Stavenfk, on the Dnieper.
8. Novomoskorsfk, on the Dnieper.
9. Pavlograd, on a river falling into the Dnieper.
10. Mariupal, on a river near the sea of Afof.
11. Bakhmuh, on the river of that name, falling into the Donetz.
12. Donetzfk, on the river Donetz.
13. Constantinograd, on the Orel, falling into the Dnieper.
14. Alexopolfk, on the same river.

Province of Taurida, or Crim Tartary.

This fertile peninsula, the great mart of commerce in the Black Sea, was colonized for the purposes of trade by the Greeks, Romans, Genoese, occupied by the Turks under Mahomet the Second, and governed by the Khan of the Tartars, a vassal to the Porte. On the peace of Kainardi, in 1774, it was declared an independent sovereignty, taken possession of by Catharine II. on the abdication of the Khan Sahim Gerai, in 1783, and confirmed to Russia by the Porte in the same year by the treaty of Constantinople. The empress has revived several of the ancient Greek names.

Contains 7 districts.

1. Levkopol, formerly Akmephiel.
2. Synpheropol, formerly Eski Krim, i. e. Old Crimea.
3. Eupatoria, formerly Koslof, or Gosleve.
4. Perekop.
5. Phanagoria, on the island of Taman.
6. Dneprovsk, on the Dnieper.
7. Melotopol, on the river Melotchnie.

XXXIV. Government

XXXIV. Government of Caucasus,

Divided into two provinces, Astracan and Caucasus, but not yet subdivided into districts.

Astracan was conquered from the Tartars, in 1552, by Ivan Vassilievitch.

Province of Caucasus,

Will comprise the Cuban, and all that district to the east and south, now in the possession of Russia, between the rivers Don and Cuban, and between the Caspian and the Euxine, extending as far as the confines of Georgia, and continually augmenting by the reduction and submission of the wandering hordes of Mount Caucasus.

XXXV. Government of Saratof,

Formerly a province of Astracan,

Contains 11 districts.

1. Saratof, on the Volga.
2. Volk, on the same river.
3. Khvalynsk, on the same river.
4. Kusnetz, on a rivulet falling into the Sura.
5. Serdobsk, on the river Serdoba, falling into the Khoper.
6. Petrofsk, on the Medveditza.
7. Atkar, or Atkarisk, on the river Atkara, falling into the Medreditza.
8. Balakef, on the river Khoper.
9. Khopersk, formerly Novokhopersk, on the same river.
10. Kamychin, called formerly Dmitreffsk, on the right side of the Volga.
11. Tzaritzyn, on the Volga.

XXXVI. Government

XXXVI. Government of Ufa,

Formerly included in the government of Orenburgh, is divided into two provinces, Ufa and Orenburgh.

Province of Ufa,
Contains 9 districts.

1. Ufa, on the right side of the Bielaia, a few versts beneath the mouth of the river Ufa.
2. Birsik, on the river Bielaia.
3. Mensclinsk, on the river Mensel, falling into the Ik.
4. Bugulm, or Bugulminsk, on the Bugulm, a rivulet falling into the Ik.
5. Bogorostan, on a river falling into the Samara.
6. Belebeief, on a rivulet falling into the Diema, which flows into the Bielaia.
7. Sterlitamak, on the small river Sterlia, falling into the Bielaia.
8. Ichalyabinsk, on the river Mijap.
9. Troitzk, on the river Ui.

Province of Orenburgh,
Contains 4 districts.

1. Orenburgh, on the Ural, formerly the Yaik.
2. Verkhouralsk, on the Ural.
3. Busulutzk, on the Samara, near the river Busuluk.
4. Sergieffk, on the river Samara.

XXXVII. Government of Viatka,

Formerly a province of Casan,
Contains 13 districts.

1. Viatka, formerly Khlynof, on the Viatka.
2. Slobodsk, on the Viatka.
3. Katelnitch, on the Viatka.
4. Orlof, on the Viatka.

VOL. III.

X x

4. Faranfk,

5. Farap'sk, on a rivulet, falling into the Viatka.
6. Nolin'sk, on the Voia, falling into the Viatka.
7. Glasof, on a river falling into the Viatka.
8. Urshum, on the Viatka.
9. Malmych, on the same river.
10. Tzarevofantchur'sk, on the river Kokchaia, falling into the Volga.
11. Sarapul, on the Kama.
12. Felabug, on the same river.
13. Kai, on the same river.

XXXVIII. Government of Perm,

Formerly a province of Casan,

Two provinces.

A. Province of Perm. B. Province of Catharinenburgh.

Contains 8 districts.

1. Perm, on the Kama, where the river Zegohekha falls into it.
2. Solkamsk, on the small river Uffolka, falling into the Kama.
3. Tcherdyn, on the river Kolva, falling into the Vichera.
4. Obvin'sk, on the Kama, near the mouth of the Obva.
5. Okhansk, or Akhansk, on the Kama.
6. Ossa, on the left shore of the Kama, where it receives the rivulet Ossinka.
7. Krasnoufim'sk, on the Ufa.
8. Kungur, on the river Sylva.

B. Province of Catharinenburgh, or Echaterinenburgh,

Formerly included in the government of Tobolsk,

Contains 7 districts.

1. Catharinenburgh, on the river Iffet, not far from its origin.
2. Schadrinsk, on the left shore of the Iffet.
3. Dolmatof, on the left shore of the Iffet.
4. Kamychloffsk, on the river Pychma.
5. Irbitz, on the small river Irbit, falling into the Nitza.
6. Alapaieffsk, on the small river Alapeikha, falling into the Neiva.
7. Verkhoturie, on the Tura.

XXXIX. Government

XXXIX. Government of Tobolsk,

Comprehends the western part of Siberia, the conquest of which country, began by Yermac Timofeef, in 1579, during the reign of Ivan Vassilievitch II. was finally concluded before the death of Feodor Ivanovitch, in 1598.

It is divided into the two provinces of Tobolsk and Tomsk.

Province of Tobolsk,

Contains 10 districts.

1. Tobolsk, on the Irtysh, opposite to the mouth of the Tobol.
2. Tiumen, on the Tura.
3. Turinsk, on the Tura.
4. Beresof on the Sossva, falling into the Ob.
5. Surgut, on the Oby.
6. Tara, on the Irtysh.
7. Yalutorofsk, on the Tobol.
8. Kurgan, on the river Kurgan.
9. Ichimsk, on the river Ichim.
10. Omsk, on the Irtysh, near the mouth of the Om.

Province of Tomsk,

Contains 6 districts.

1. Tomsk, on the river Tom.
2. Kainak, on the river Om.
3. Naryn, on the Oby, below the mouth of the Ket.
4. Mangasieia, or Turukhansk, on the Yenisei.
5. Yeniseisk, on the river Yenisei.
6. Atchinsk, on the river Tchulym, falling into the Ob.

XL. Government of Kolyvan,

Formerly included in the government of Tobolsk,

Contains 5 districts.

1. Kolyvan, the new capital of this government, on the Oby, near the mouth of the Berda, known before the institution of this government under the name of *Berdskoi Ostrog*.
2. Semipalat, on the Irtysh.
3. Biisk, on the river Bi, or Biia, which, by uniting with the Katunia, forms the river Oby.
4. Kufnezk, on the river Tom, opposite to the mouth of the Kondoma.
5. Krafnioiarsk, on the Yenisei, where it receives the Katcha.

XLI. Government of Irkutzk,

The largest and least peopled government in Russia, comprises all the eastern part of Siberia, from the Northern Ocean to the frontiers of Chinese Tartary, and from the boundaries of the government of Tobolsk to the Eastern Ocean. This large territory was gradually conquered and appropriated by the Russians in their desultory excursions from Tobolsk.

It is divided into the four provinces of Irkutzk, Nertschinsk, Yakutsk, and Okotzk.

Province of Irkutzk,

Contains 4 districts.

1. Irkutzk, on the Angara, opposite to the mouth of the river Irkut.
2. Kirensk, on the Lena, above the mouth of the Kirenga.
3. Nishnie-Udinsk, on the river Uda, falling into the Upper Tunguska.
4. Verkhnei-Vedinsk, on the river Vecla, falling into the Selenga.

Province

Province of Nertchinsk,

Contains 4 districts.

1. Nertchinsk, on the Nertcha, falling into the Schilka.
2. Doroninsk, on the Ingoda.
3. Bargufinsk, on the river Bargufin, falling into the lake Baikal.
4. Stretinsk, on the Schilka.

Province of Yakutsk,

Contains 5 districts.

1. Yakutsk, on the Lena.
2. Olekminsk, on the Lena, several versts above the mouth of the Olekma.
3. Olenk, a town to be erected on the river Olenek.
4. Schigansk, on the Lena, about 800 versts from Yakuzk.
5. Sachiversk, on the Indigirka.

Province of Okozk,

Contains 4 districts.

1. Okotzk, on the mouth of the Okota, falling into a bay of the Eastern Ocean.
2. Ichiginik, on the mouth of the river Ichigina, falling into the bay of Penshina.
3. Aklansk, on the small river Aklan, falling into the river Penshina.
4. Nishnie-Kamtchatka, on the river Kamtchatka, about 30 versts from its mouth.

A P P E N D I X.

Nº 2.



List of the Books consulted or referred to in this additional Volume.

BACKHO's Handbuch der Geschichte und Erdbeschreibung Preussens, 8vo. Dunamund and Leipzig, 1784.

Bemouli's Reisen durch Brandenburg, Pommern, Preussen, Curland, Rußland, und Poln, in 1777 and 1778, 3 vol. in 12mo. Leipzig, 1779.

Fabricius Reise in Norwegen, small 8vo.

Gadblusch Livl Caendische Jarbuecher, in 8vo. several volumes. Riga, 1780.

Hansen's Staats-beschreibung des Hertzogthums Schleswig, 8vo. Flamburgh, 1770.

Hupel's Topographische Nachrichten von Lief und Esthland, 3 vol. 8vo. Riga, 1774, 1782.

Pontoppidan's Natural History of Norway, folio.

Schmidt's Materialien der Russische Geschichte, Part ii.

Wilse's Reise Beobachtungen auf einigen Reisen in Danemarck und Norwegen, in Bernoullis' Collection, 7, 8, and 10. Band.

Ziegenhorn's Staats-Recht der Hertzogthuemer Curland und Semigallen, in folio. Königsberg, 1772.

I N D E X.

I N D E X.

- A**GGERHUUS, the castle of, at Christiania in Norway, described, 155.
- Alstroem*, Mr. the engineer, account of the canal of Stroemsholm, executed under his direction, 185.
- Anker*, Mr. Bernard, merchant of Christiania in Norway, his character, 157.
- Anthony Ulric*, prince, and his family, account of their confinement, 15. His differences with Ernest John Biron the regent, 289.
- Archangel*, the Russian government of, its division into districts, 327.
- Authorities* consulted or referred to in this volume, 342.
- Bank* at Stockholm, historical account of, 109. Principal regulations of, 111. Mode of transacting business, 113. How secured against the encroachments of the crown, 115.
- Bark* of the fir, pine, birch, and elm, uses to which it is applied by the Norwegians, 136, 142.
- Bernsdorf*, count, beautiful situation of his villa, 20. The liberal conduct of the late count, commemorated by his peasants, 21.
- Birch-tree*, extensive uses of, to the Norwegians, 143.
- Biron*, Ernest John, count, history of his short sovereignty over the duchy of Courland, 280. Memoirs of his life, 282. His character, 285. His arrest, and disgrace, 292. His recal, and death, 294.
- Blagden*, Dr. his inference from a comparison between natural cold, and that produced by freezing mixtures, 254, note.
- Blue*, Prussian, the preparation of, 165.
- Bohus*, isle of, account of the fort there, 123.
- Brahe*. See *Tycho*.
- Brandt*, count, his intrepid behaviour at his execution, 25.
- Braun*, professor, of Petersburg, the first who rendered quicksilver solid by artificial cold, 244.
- Brown*, general, governor of Riga, character, and brief memoirs of, 270.
- Buesch*, professor, his plan to recover the commerce of the city of Lubec, 4. His account of the mode of agriculture in Smoland, 73.
- Calendborg*, castle of, 16.
- Calmar*, in Sweden, described, 71.
- Cappel*, the town of, described, 9.
- Carlscona*, account of the works now carrying on there, 70.
- Carlstadt*, in Sweden, described, 178.
- Caucasus*, the Russian government of, its division into provinces, 336.

*

Charles

I N D E X.

- Charles IX.* of Sweden, his monument, and character, 121.
- Charles XI.* of Sweden, patronizes the bank at Stockholm, 110.
- Charles XII.* of Sweden, his honourable conduct toward the bank of Stockholm, 113. Additional circumstances collected relative to his death, 146.
- Christian IV.* of Denmark, fine painting of his naval heroism, 17. His bravery the subject of a popular song, 24. His unworthy treatment of Tycho Brahe, 58. Designs, and rebuilds the city of Christiania in Norway, 154.
- Christiania*, the capital of Norway, described, 154. Account of its trade, 156.
- Claussen*, general, his public undertakings at Fredericksverk, 44.
- Cobalt* works, at Fossun in Norway, account of, 163.
- Cold*, natural and artificial, inferences from a comparison between, 254.
- Colding*, in Jutland, the royal palace there described, 11.
- Copenhagen*, description of the royal palace there, 17. The royal libraries, 18. The environs, and royal park, 26.
- Copper* mine at Fahlun, in Sweden, with the process of obtaining the metal from the ore, 198.
- Courland*, extent and history of the duchy of, 278. The constitution of, explained, 295. Privileges of the nobility, 299. General description of the country and its trade, 304.
- Crim Tartary*, the Russian province of, its division into districts, 335.
- Dabl*, river, cataract of, 202.
- Dalecarlia*, account of the province of 192. Memorials of Gustavus Vasa there, 195. The copper mine at Fahlun, 198.
- Danemora*, description of the iron mine, 205.
- Deichman*, Mr. his bequest of a library to the town of Christiania, in Norway, 155.
- Denmark*, description of Copenhagen, 17. The slavery of the peasants beginning to decline, 21. Revenue and government expences, 27. Public debt, 28. Account of the revolution in the administration of government, effected by the prince royal, 29.
- Des Cartes*, account of the monument lately erected to him at Stockholm, 86.
- Dorpt*, the devastations that city has undergone, 266.
- Dramme*, river, and neighbouring valley, described, 160.
- Drottningholm*, a palace of the king of Sweden, described, 81. Account of a gala day there, 83.
- Ecaterinesflack*, the Russian government of, its division into districts, 334.
- Ehrensabl*, the Swedish painter, his excellent portrait of Charles XII. 184.
- Elizabeth*, the youngest sister of the Russian prince Ivan, her character, 13.
- Elkenfon*, Benk, an old Norwegian, his account of the death of Charles XII. of Sweden, 147.
- Empack*, inscription on the bridge built over that river by the Russians, 267.
- England*, the name of, from whence derived, 9.
- Esthonia*, history of that province, 260. Its division into districts, 319.
- Eutin*,

I N D E X.

- Eutin*, the palace of the prince bishop of Lubec there, described, 6.
- Fahlun*, the town of, and its copper mine, described, 198.
- Finland*, Russian, the government of, its division into districts, 319.
- Flendshurg*, the trade of that town, described, 10.
- Forests* of Norway, extensive advantages of, to the natives, 142.
- Fossum*, in Norway, the cobalt works there, described, 163.
- Frederic I.* of Denmark, his tomb in the church of Sleswic, described, 8. His character, 9.
- Frederic IV.* of Denmark, his affection for, and improvement of peace, 42.
- Fredericshorg*, a palace of the king of Denmark, described, 39.
- Fredericshall*, the principal trade carried on there, 145. The harbour choaked with saw-dust, 146.
- Fredericstadt*, the fortrefs of, described, 151.
- Fredericstein*, the fort of, described, 146.
- Fredericswerk*, the public manufactures established there, 43.
- Friedensberg*, a palace of the king of Denmark, described, 41.
- Gefle*, town of, in Sweden, described, 202.
- Glomme*, river, described, 152, 172.
- Goertz*, baron, his arbitrary expedients, recover the credit of the bank of Stockholm, 112.
- Gotheborg*, account of the herring fishery there, 124. How that city was lately saved from the Danes, 125.
- Gran*, in Norway, the sister churches there, 170.
- Gripsholm*, a palace of the king of Sweden, described, 118.
- Gulberg*, Mr. acts as the confidential agent of Louisa Maria, queen dowager of Denmark, 30. Is honourably removed by the prince royal, 36.
- Gustavus Adolphus*, description of the colossal statue of, now executing at Stockholm, 81.
- Gustavus Vasa*, memorials of him in Dalecarlia, 195.
- Guthrie*, Dr. his experiments for the congelation of quicksilver at Peterburgh, 243.
- Haga*, a villa of the king of Sweden, its gardens described, 82, *note*.
- Hedgehog*, experiments on, during its torpid state, by Dr. Pallas, 257.
- Hemp*, the trade in, how conducted at Riga, 269.
- Herring* fishery, at Gotheborg, account of, 124.
- Hirsholm*, a palace of the king of Denmark, described, 38.
- Honours* and rank, how taxed in Denmark, 27, *note*.
- Horfens*, account of the brothers and sisters of the Russian prince Ivan, confined there, 12.
- Huen*, the island of, described, 48. Tycho Brahe's residence, 49.
- Huitfield*, the Danish admiral, his heroism celebrated in a song, 23.
- Hutchins*, Mr. his experiments on the congelation of quicksilver, at Hudson's bay, 246. Conclusions from, by Mr. Cavendish, 255.
- James I.* of England, his visit to, and admiration of, Tycho Brahe, 57.

Y y

Jonkioping,

I N D E X.

- Jonkioping*, the capital of Smoland, described, 74.
- Izkuzk*, the Russian government of, its division into districts, 340.
- Iron* mines at Danemora, in Sweden, described, 205.
- Isabella*, queen of Christian II. of Denmark, her conjugal virtues, 40.
- Ivan*, prince, account of his brothers and sisters, confined at Horsens in Jutland, 12.
- Kaluga*, the Russian government of, its division into districts, 323.
- Kasan*, the Russian government of, its division into districts, 329.
- Kharkof*, the Russian government of, its division into districts, 334.
- Kiof*, the Russian government of, its division into districts, 333.
- Kiel*, impediments to the success of the canal of, 7.
- Kolyvan*, the Russian government of, its division into districts, 340.
- Kongsberg*, account of that town, and its silver mines, 161.
- Konigsberg*, the capital of Prussia, general account of, 307. Tables of its exports and imports, 309. Its university and libraries, 312.
- Kongswinger*, fortress of, in Norway, described, 174.
- Kostroma*, the Russian government of, its division into districts, 328.
- Kursk*, the Russian government of, its division into districts, 331.
- Landscrona*, described, 66.
- Language*, of Denmark and Sweden, distinguishing characters of, 133, note.
- Lichen Islandicus*, a nutritive food in Iceland, during times of scarcity, 137.
- Livonia*, brief history of that province, 260. How divided into districts, 319.
- Loeffla*, the seat of baron Geer, and his iron founderies, 203.
- Louisa Maria*, queen dowager of Denmark, the absolute sway she acquired over the administration, 29. Is supplanted by the prince royal, 33.
- Lubec*, the city of, described, 3.
- Lund*, the capital of Scania, described, 68.
- Luther*, Martin, the reformer, his undaunted appearance at the Diet of Worms, 313.
- Mackarel*, why not eaten by the Norwegians, 141.
- Marstrand*, island of, and its trade described, 126.
- Masts*, the trade in, how conducted at Riga, 268.
- Medwi*, regulations observed by those who come to drink the mineral waters there, 77.
- Mommel*, in Prussia, described, 304.
- Mentchikoff*, prince, his ineffectual attempts on the duchy of Courland, 280.
- Mercury*. See *Quicksilver*.
- Miofs*, lake, in Norway, described, 172.
- Mittau*, description of the town and ducal palace of, 277.
- Mobilef*, the Russian government of, its division into districts, 322.
- Molcke*, admiral, elegant entertainment given by, on board his ship, 22.
- Moscow*, the Russian government of, its division into districts, 324.
- Moss*, its romantic situation, and iron works, 152.
- Narva*,

I N D E X.

- Narva*, its situation and trade, 264. Account of the famous battle of, 265.
- Nishnei Novogorod*, the Russian government of, its division into districts, 328.
- Nordkiöping*, in Sweden, described, 78.
- Norway*, general remarks on that country, 130. Character of the natives, 132. And of the Norway code, 134. *Odell's Right*, explained, *ibid.* Variations of the seasons, 137. State of agriculture there, 138. Management of their cattle, 140. Fisheries, 141. Great benefits derived from the forests, 142. General exports of the country, 143. Description of Christiania, 154. The country infested with wolves and bears, 170.
- Novogorod*, the Russian government of, how divided into districts, 320.
- Novogorod Severskoi*, the Russian government of, its division into districts, 332.
- Odell's right*, in the Norway customs, explained, 134.
- Oernetz*, the retreat of Gustavus Vasa, described, 196.
- Olonetz*, the Russian government of, its division into districts, 318.
- Orel*, the Russian government of, its division into districts, 323.
- Orloff*, prince, account of his palace at Peterburgh, 215.
- Paintings*, original, why not easily distinguished, 219.
- Pallas*, Dr. his experiments to ascertain the difference between the heat of animals in their natural, and in their torpid states, 257.
- Palmshut*, Mr. history of his establishment of the bank at Stockholm, 109.
- Paradisberg*, in Norway, described, 159.
- Penza*, the Russian government of, its division into districts, 330.
- Perm*, the Russian government of, its division into districts, 338.
- Petersburgh*, account of the marble palace there, 215. Cabinet of pictures in the imperial palace, *ibid.* Division of the government of, into districts, 318.
- Philipstadt*, in Sweden, account of, 178.
- Poland*, retrospective view of the political circumstances of that kingdom, 314. Its present dependent situation, 315.
- Polotsk*, the Russian government of, how divided into districts, 322.
- Poll tax*, table of the numbers of peasants assessed to it, in the respective governments of the Russian empire, 224.
- Prussia*, late king of, his influence in the cabinet of Denmark, 29. Short history of that kingdom, 306.
- Pskof*, the Russian government of, how divided into districts, 320.
- Quartz*, account of the mines of, at Skuterad in Norway, and its uses, 166.
- Quicksilver*, the congelation of by cold, proved by the experiments of Dr. Guthrie, 243. Is, in its usual form, a melted metal, 245. Experiments to ascertain the freezing point by the thermometer, 247. Inferences from them, 253.
- Rands Sion Lake*, in Norway, account of, 169.
- Ratzeburgh*, the town of, 3.
- Y y 2
- Revel*,

I N D E X.

- Revel*, the Russian government of, its division into districts, 319.
- Rezan*, the Russian government of, how divided into districts, 325.
- Revenues*, of the crown of Denmark, stated, 27.
- Rheumatism*, Norwegian remedy for, 143.
- Rhodolph II.* emperor, affords protection to Tycho Brahe, 59. His death attributed to Tycho Brahe's prediction, 63.
- Riga*, the capital of Livonia, its description and trade, 267. The floating bridge there, described, 271. Tables of the annual number of vessels resorting to Riga, with the value of their cargoes, 273. The government of, how divided into districts, 319.
- Russia*, great plans for the interior improvement of, prosecuted by the present empress, 220. Data for ascertaining the population of the Russian empire, 223. Alterations that have taken place in the revenues, 226. State of the Russian army, 229. Present division of the Russian empire, into governments, provinces, and districts, 318.
- Saratof*, the Russian government of, its division into districts, 336.
- Saxe*, marshal, how elected to, and dispossessed of, the duchy of Courland, 279.
- Schach Rathlow*, M. his share in the revolution effected by the prince royal, in the cabinet of Denmark, 35.
- Scheele*, Mr. the experimental chemist, his memoirs and character, 179.
- Sergell*, Mr. the Swedish statuary, his character and performances, 85.
- Silver* mines, at Kongsberg in Norway, described, 161.
- Simbirsk*, the Russian government of, its division into districts, 329.
- Smoland*, account of the province of, 72. Mode of agriculture there, 73.
- Smolensko*, the Russian government of, how divided into districts, 321.
- Sound*, number of vessels that passed there in the year 1782. Specified, 27.
- Steiknitz*, the canal of, described, 2.
- Steno Shere*, the elder, his character, and monument, 120.
- Strægnetz*, account of that town, 120.
- Stroemsholm*, the Swedish palace of, 183. Canal of, described, 185.
- Struensee*, count, his imprisonment and execution, described, 24.
- Stucco*, durable, the Danish composition of, 45.
- Sveaborg*, the fortress of, described, 211.
- Subm*, Mr. of Copenhagen, his valuable library, 19. His literary character, 20.
- Sweden*, mode of travelling in, 68. Attention of the king to the polite arts, 84. The present constitution of the government explained, 87. General view of the Swedish commerce, 93. Balance of trade with different countries, estimated, 102. State of navigation in and out, 103. State of the revenues, 105. Expences of government, 106. Historical account of the bank of Stockholm, 109. Excellence of the roads in, 176.
- Swinesund*, bay of, described, 145.
- Tanbof*, the Russian government of, its division into districts, 330.
- Tchernigof*, the Russian government of, its division into districts, 332.
- Thermometer*, mercurial, its credit not affected

I N D E X.

- affected by the experiments on the congelation of quicksilver, 254.
- Thott*, count, his curious library, 19.
- Tingwalla* island, account of, 178.
- Tistedal*, village of, its pleasant situation, 150.
- Tobolsk*, the Russian government of, its division into districts, 339.
- Travemund*, described, 5.
- Trolhætta*, public undertakings carrying on there, 122.
- Tver*, the Russian government of, how divided into districts, 321.
- Tula*, the Russian government of, its division into districts, 324.
- Tycho Brahe*, his residence described, 49. Memoirs of his life, 50. His character, 61.
- Tyri*, lake, in Norway, described, 167.
- Uddevalla*, town of, and its trade described, 129.
- Ufa*, the Russian government of, its division into districts, 337.
- Viatka*, the Russian government of, its division into districts, 337.
- Volodimir*, the Russian government of, its division into districts, 325.
- Vologda*, the Russian government of, its division into districts, 326.
- Voronetz*, the Russian government of, its division into districts, 331.
- Uranienburgh*, the residence of Tycho Brahe, account of, 55.
- Urtica Cannabina*, or hemp nettle, described, and recommended, 269.
- Wadstena*, account of the castle of, 75.
- Walker*, Mr. of Oxford, his experiments on the congelation of quicksilver, 256.
- Wermeland*, and Westmanland, provinces in Sweden, their beautiful lakes, 177.
- Wetter*, lake, popular traditions concerning, 75.
- Wiburgh*, the Russian government of, its division into districts, 319.
- Yaroslaf*, the Russian government of, its division into districts, 326.

F I N I S.



BOOKS published by the same AUTHOR,

Printed for T. CADELL, in the STRAND.

TRAVELS into POLAND, RUSSIA, SWEDEN, and DENMARK; interspersed with Historical Relations and Political Inquiries, illustrated with Charts and Engravings, 3d. edit. 4 vols. 8vo. 1*l.* 10*s.*

ACCOUNT of the RUSSIAN DISCOVERIES between ASIA and AMERICA; to which are added, The Conquest of Siberia, and the History of the Transactions and Commerce between Russia and China, 3d. edit. 8vo. 7*s.* 6*d.*

TRAVELS in SWITZERLAND, and in the Country of the GRISONS, in a Series of Letters to WILLIAM MELMOTH, Esq. With a large whole-sheet Map of Switzerland, and other Engravings, 3 vols. 8vo. 1*l.* 7*s.*

ACCOUNT of the PRISONS and HOSPITALS in RUSSIA, SWEDEN, and DENMARK; with occasional Remarks on the different Modes of Punishments in those Countries. Inscribed to JOHN HOWARD, Esq. 8vo. 2*s.*

